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VOLUME 126, NUMBER 1 JULY, 1964

IMJ

Illinois Medical Journal

OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY

Clinical Articles

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Lymphosarcoma Producing Mikulicz Syndrome, page 30

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ROLAND I. PRITIKIN, M.D.
TALCOTT BLDG.
ROCKFORD, ILL.

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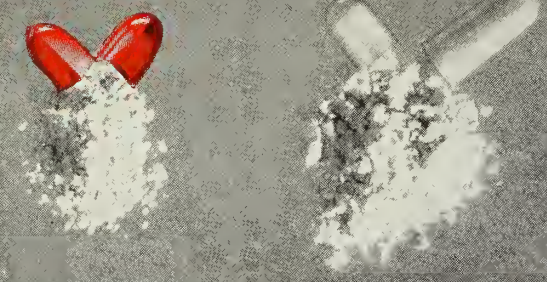
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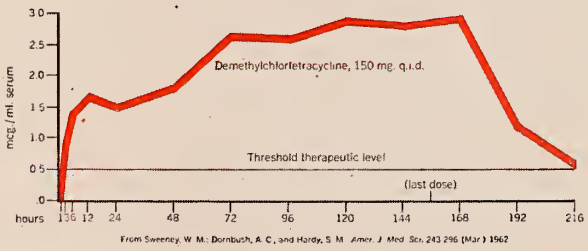
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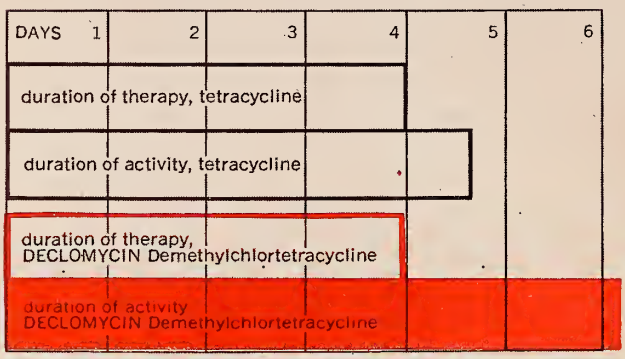


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Abstracts of Board Actions

Meetings of May 17-21, 1964

SHERMAN HOUSE, CHICAGO



Jirka and Siegel to Attend Political Conventions

Dr. Frank Jirka, River Forest, was named official representative to attend and appear before the Platform Committee of the Democratic Convention in Atlantic City. Dr. V. P. Siegel, East St. Louis, was named to the Republican Convention in San Francisco.

Board Agrees: No Fathers in Delivery Room

At the request of Dr. Franklin D. Yoder, Director of the State Department of Public Health, the Board reaffirmed its support of the present regulation which prohibits fathers in the obstetrical delivery room.

Master Maternal and Perinatal Mortality Plan Approved

Approval was given to proceed with planning for a committee to coordinate all maternal and perinatal morbidity and mortality studies in the state. This committee would establish a uniform procedure for reporting, classifying and analyzing all such cases. It would include the Maternal and Perinatal Registry Committee of the Illinois Association for Maternal and Child Health; the Joint Maternal Welfare Committee of Cook County; the Maternal Welfare, Perinatal Mortality and Child Health committees of ISMS, and the Suburban Maternal Welfare Committee. The program would be implemented by a grant to be obtained through the Educational and Scientific Foundation of ISMS.

Staff to Produce Pilot Program on Aging

Dr. E. W. Cannady, speaking for the Committee on Aging, reported that apathy at the local level has made it impossible to achieve success with district programs. It was decided that the staff of ISMS should establish a pilot program in one of the trustee districts to test whether this and similar programs might be successful at the district level.

Political Candidates to Get Fair Deal on Mailings

The Board enacted the following policy concerning the use of ISMS mailing lists by political candidates:

1. The list will be restricted to candidates in the presidential election and in state-wide elections in Illinois.
2. Upon receipt of a request from one candidate, the candidate of the other major party will be notified and the list will be made available to him.
3. ISMS will reserve the right to approve the contents of the mailing.
4. The candidate will be charged the actual cost of the addressing service.

Trustees Give O.K. to Idea of Chicago Medical Museum

At the request of Dr. Worling Young, the Board approved in principle the development of a medical museum in the west side medical center of Chicago. No money was requested for the project which would be paid for either by a bond issue or by private subscription. The nucleus of the museum would be 30 OB-GYN exhibits belonging to Dr. Frederick Falls, Miss Charlotte Holt and the State Department of Public Health.

Role of Alcohol in Car Deaths to Undergo Study

The Committee on Public Safety will work with the State Department of Public Health on a project to correlate blood alcohol studies with mortalities resulting from automobile accidents. Blood samples will be drawn from two types of fatalities: (1) drivers of vehicles, (2) pedestrians more than 16 years old. All data will remain confidential.

Kerner and Percy Both Asked to Retain Yoder

Because of the excellent relationships which have existed between the State Department of Public Health and ISMS under the directorship of Dr. Franklin D. Yoder, letters will go to both Gov. Kerner and Mr. Percy expressing the hope that Dr. Yoder and his excellent professional staff will be retained after the election in November.

Blue Shield Survey Endorsed—Please Cooperate

The cooperation of ISMS in a survey by the National Association of Blue Shield Plans was pledged by the Trustees. The survey is planned to determine the adequacy of the Blue Shield plan in meeting total charges made by physicians for their services. Both physicians and patients will be sampled in the mail survey.

Retirement-Investmnt Plan Goes to Finance Committee for Review

The Committee on Medical Economics presented a proposal covering a retirement-investment plan for ISMS members. It was approved in principle. However, a recommendation that ISMS provide consultation services without charge to the plan was referred to the Finance Committee for consideration.

Disaster Medical Care Training Plans Move Along

The Committee on Disaster Medical Care reported that it is working with the Department of Civil Defense, the Illinois Department of Public Health and the Illinois Hospital Association in laying groundwork for the establishment of a unique program designed to train medical, para-medical and hospital personnel in the utilization of the 68 Civil Defense Emergency Hospitals stored underground in various parts of the state.

Dates for 1964-65 Board Meetings Confirmed

The schedule of Board of Trustee meetings for the coming year was confirmed:

July 18-19	Bismarck Hotel, Chicago
Sept. 19-20	Ambassador Hotel, Chicago
Jan. 16-17	Sherman House, Chicago
Mar. 13-14	LaSalle Hotel, Chicago
May 16-20	Sherman House, Chicago

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By Robert L. Richards
Executive Administrator

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The Illinois Association of the Professions is a nonprofit corporation, incorporated under the laws of Illinois on February 6, 1964.

It was created to provide the organizational machinery whereby the combined strength and counsel of all professions can be utilized for the advancement of professional ideals and the promotion of professional welfare. The combining of forces should not only strengthen the traditional rights, privileges, and responsibilities of each profession, it should also provide better professional services for the public.

IAP is *not* a political organization. It is nonpartisan. However, it will serve its members as one practical medium of communication between the professions and legislative bodies.

IAP does not replace any one professional society, compete with it, or duplicate its efforts. It rather *supplements* efforts, programs and services of the individual state professional societies. The professional societies must function for the profession each represents. The IAP will benefit the individual member by helping him protect and perpetuate the individual privileges and responsibilities of the professional person.

The seven state professional societies which founded the IAP are: Architects Association of Illinois; Illinois State Dental Society; Illinois Society of Professional Engineers; Illinois State Medical Society; Illinois Pharmaceutical Association; Illinois State Veterinary Medical Association, and the Illinois State Bar Association. Admission of other professional societies to membership is provided for in the IAP bylaws.

The IAP is governed by a Board of Directors; and Board *recognition*, rather than *control*, is accorded to those professions having larger numbers of individual members. IAP bylaws provide that the Board of Directors of each State Organization shall designate two of its members, who are also members of IAP, to serve as Directors. In addition to those so designated, Directors are also elected from the general membership at the IAP Annual Meeting.

Each IAP member automatically receives a subscription to MONITOR, a quarterly publication of the Association of the Professions. Special reports and studies are disseminated directly to the individual member.

Annual dues for an individual member in IAP is $10. Annual dues for a Professional Society is $100.

Only by coordinated action can the professions clearly demonstrate to the general public why they do—what they do—in the way they do it and why that "way" is in the best interest of the public. The Illinois Association of the Professions is the only organization in the State of Illinois which can supply this coordinated action.

IMJ

Illinois Medical Journal

volume 126, number 1 july, 1964

Medical Aspects of Juvenile Delinquency

James B. Gillespie, M.D., *Urbana*

With the possible exception of the psychiatrist, the pediatrician is perhaps more intimately associated with the problem of juvenile delinquency than is any other type of physician. This fact has long been acknowledged by the American Academy of Pediatrics. During the mid 1950s, therefore, the Academy established a national committee to study the medical aspects of delinquency, to make recommendations regarding the pediatric role in approaches to the problem, and to cooperate with auxiliary groups in attacking it.

In 1960 the Academy composed and distributed a brochure entitled *The Pediatrician's Role in Preventing Delinquency* to the Academy membership and to other interested groups and individuals. This publication pointed up a workable concept of juvenile delinquency to the practicing pediatrician. It also offered concrete suggestions for medical approach to the prevention, control, and diagnosis of this problem.

Only the family and the schools have contact with all children. However, pediatricians, general practitioners, health department personnel, and nursery school attendants have contact with a significant number of them. In actual practice, these and the other agencies which supervise the activities of children in the preschool period have not yet crystallized, delineated, and developed their roles in the early identification of delinquency. Though many children may not be accessible to medical persons and groups for any significant period, a considerable number are. It is with these children that the pediatrician does see, that he has a primary responsibility.

Although juvenile delinquency is not exclusively a medical problem, it is very much a physician's concern. In the child's early years, the pediatrician's advice to parents can be a major factor in providing the kind of understanding management which can prevent development of attitudes and feelings leading to deviant behavior. The physician may help to prevent or modify physical illnesses, defects, and handicaps which may often represent a major factor in producing delinquent behavior.

A ten-year study of 500 delinquents and 500 non-delinquents[1] showed that one-half of the delinquent groups were less than eight years of age when antisocial tendencies first became prominent. Nine-tenths of them were less than 11 years of age when these tendencies appeared. It is known that the treatment of the vulnerable child and the delinquent is more effective if it is given before or at the beginning of puberty. At such times the child is not confronted with the additional problems of normal adolescence. Delay in therapy results in prolongation and greater expense, with reduction in chances for rehabilitation.

This study also described a scale based upon

From the Department of Pediatrics, Carle Hospital Clinic and Carle Memorial Hospital, Urbana, Illinois.

five social factors which most sharply differentiate the delinquent from the non-delinquent boy. Those factors operating in the life of the pre-school child include: (1) discipline of the boy by the father; (2) supervision of the boy by the mother; (3) affection of the father for the boy; (4) affection of the mother for the boy; and (5) cohesiveness of the family.

A weighted score is attached to each factor and its sub-classifications. The weight of the factor had been determined by its prevalence in a previous study. Others have corroborated the validity of these studies among groups of several racial origins.

The appearance of anti-social behavior, whether noted initially at home or in the school, is usually called first to the attention of the family physician. The time he spends in listening, his efforts to find and demonstrate any physical disorder or handicap which contribute toward development of aberrant behavior, and his endeavor to obtain assistance from other professional or specific agencies dealing with delinquency may be major factors in the control of any individual problem.

Dr. Lee Forrest Hill tells about the father who consulted him after his teen-age son was involved in a "brush with the law." The father remarked, "Dr. Hill, we didn't do a very good job in raising John, did we?" This observation seems to indicate that some parents consider the physician's responsibility to be more than the supervision of physicial health alone.

The pediatrician's main role in combating juvenile delinquency is in the area of prevention. Once the child has transgressed the laws of the community and has become a legally-defined delinquent, the task of rehabilitation is a difficult one. No completely satisfactory solution of the problem—and certainly no simple one—exists at present.

As indicated, the family physician is probably the first person to be contacted when a child's emotional deviation is first detected. A pediatrician's medical background and special capabilities for the assessment of growth and development, and his close relationship to the family affords opportunities for unusual service. The absolute necessity of providing a healthy emotional environment in the home must often be pointed out to parents who are experiencing difficulty. Not infrequently, the pediatrician, as friend and counselor, can transmit appropriate advice more successfully in a short interview than the best planned agency program can convey.

Medically speaking, many children are cast adrift at adolescence. Until recently, the child's contact with his pediatrician was often abruptly ended at an arbitrary age between 14 and 16 years. This often occurred without any effort on pediatrician's part to arrange for a continuum of medical care through other sources.

In the past few years pediatricians have recognized the importance of pediatric supervision of the adolescent. The emotional and physical problems of this teen-age group may be most satisfactorily handled by the physician who has always cared for and counseled these young people in the past. Facilities that provide complete medical care for the adolescent have been established in some areas. One example of such a facility is the Adolescent Center in Boston.

Katherine Oettinger[2] states that "out of the many approaches to delinquency, evaluation and studies all point to one inescapable fact—that the prevention and control of delinquency demands close coordination among all the organizations of the community—the schools, the churches, the law enforcement, health and welfare agencies." Basically, the problem of delinquency prevention is a problem of social organization or reorganization. Other approaches have merit only to the degree that they contribute to such reorganization. Students of delinquency are becoming increasingly aware how necessary it is to reach out beyond the child and his family when they attempt to prevent delinquency. It is suggested that the most efficacious approach for modifying the operating milieu of the bulk of our delinquents is through the widespread establishment of community-centered programs of prevention.

We are approaching a critical situation because we have failed to reverse the rising trend in juvenile delinquency. The present local, state, and national resources for the detection, treatment, and rehabilitation of delinquent or predelinquent children are inadequate, unevenly distributed, and severely strained. These agencies will experience difficulty in dealing with problems such as further increases in our youth population and the subsequent rise in delinquency. The services of all concerned individ-

uals, disciplines and voluntary agencies are sorely needed in such complex programs as delinquency prevention.

A pediatrician has a dual responsibility in delinquency prevention, both as a physician and as a citizen. As a respected citizen recognized for his special concern for all the problems of youth, he may be a potent force in stimulating community interest in the delinquency problem.

Voluntary health and welfare agencies are American institutions developed within the past half century. A good many of them are active in the field of delinquency prevention, detection, and control. These agencies will request the pediatrician's participation in the formulation and implementation of their programs. Assuming such responsibility is his moral obligation. Only by so doing can a pediatrician assist the large group of children and young people in the United States who have little contact with physicians, and who can only be reached by a multidisciplinary approach at the community level.

A physician may serve the agency both by promoting its objectives and guiding its policies and procedures along lines that conform to sound medical practice. In the coming decade, one of the major needs in the field of delinquency prevention, control, and treatment is increased citizen leadership and participation.

The physician should have knowledge of both his community resources and needs as regards delinquency. A knowledge of successful programs in other communities can be applied to bring similar improvements to the local scene. Eradication of delinquency cannot be relegated to law enforcement agencies alone, and there are in many communities several agencies concerned with both the individual child and the broad community problem. The pediatrician should know all community resources equipped to aid children of various ages, and he should disseminate this information to those who need the knowledge.

Medical students have been well grounded in the concepts of organic medicine, but there has been a deficiency in teaching the techniques of observation of environment and the cultural and social problems of the family. Students at undergraduate levels must be afforded opportunities for repeated and extended observation of normal as well as sick children and their families. In several medical schools teaching programs have been developed with a decided family slant. Stitt et al,[3] reporting on the pediatric experience in a Family Health Clinic in Boston, concluded that "the described clinic pattern is conducive to joint pediatric and psychiatric exploration of family personality and development, and to early identification and furtherance of parental strength—factors which make the clinic pattern helpful in the teaching and practice of child health supervision." Growth and development can logically form the framework for considerable portions of an undergraduate medical curriculum.

In conclusion, it might be indicated again that juvenile delinquency cannot be solved by any single group or discipline. It is a civic problem that must be met by the combined resources of a community. The pediatrician is uniquely qualified by training and experience to contribute significantly to the general problem, both as a physician and as a citizen in his community. Both an opportunity and a responsibility are apparent.

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Lymphosarcoma Producing Mikulicz Syndrome

Benjamin E. Robinson, M.D.*, and Robert M. Hoyne, M.D.**

H. P. Hinsworth is quoted as follows on the subject of Syndromes—"We are now witnessing a liberation of medical thought by the substitution of 'Syndromes' for 'disease entities' as the units of illness. Disease entity implies that any particular illness has a specific cause, a sort of invariable pre-requisite for the illness. The syndrome has, as its philosophical basis, not specific disease factors but a chain of physiological processes, interference with which at any point introduces the same impairment of bodily function. The same syndrome may thus arise from many different causes."[1]

Johann von Mikulicz first described the condition which bears his name in 1888. Four years later he wrote a detailed report of a case and a review of the literature.[2] The syndrome consists of bilateral painless enlargement of the salivary and lacrimal glands, and is often accompanied by decreased salivary and lacrimal secretions.

The following is a case of Mikulicz syndrome, produced by lymphosarcoma which is similar in many respects to that reported by Miller and Eusterman[4] in 1944. The etiologic diagnosis was made by histopathologic examination of a biopsy specimen taken from the lacrimal gland. Further support to the diagnosis was obtained by the patient's gratifying response to treatment.

Case Report

J. C. B. (#190513), age 68, was first seen on February 9, 1960. He had been well until about one year before admission. At that time his eyelids began to swell. This had initially been considered to be of an allergic nature. However, the swelling failed to improve with medications, and the eyelids gradually became more swollen.

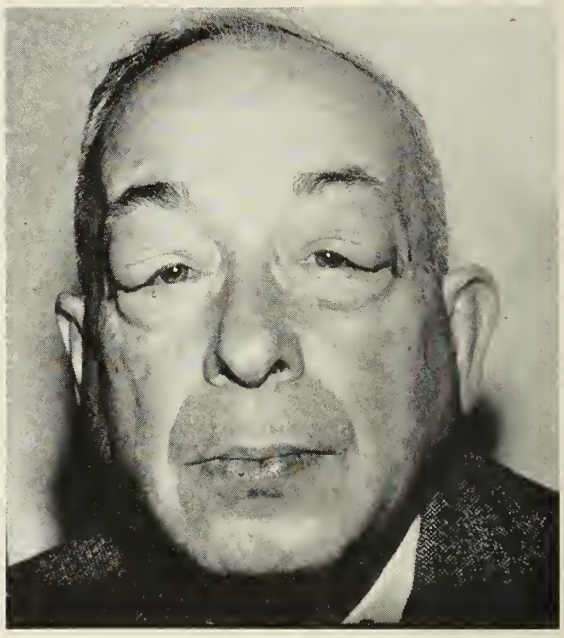


Figure 1
Full-face photograph prior to treatment showing obvious lacrimal and parotid gland enlargement. Note the S-shaped upper eyelid border characteristic of lacrimal gland enlargement.

About six months before admission he had a "strep throat infection." This had been relieved by penicillin therapy. Soon thereafter he developed swelling of both jaws with excessive dryness of mouth and lips, but not of eyes. He felt generally well, although his weight had decreased by about 20 pounds during the preceding year.

History

Investigation of past history revealed seasonal hay fever and asthma caused by a ragweed allergy of several years duration. He had undergone an uneventful hemorrhoidectomy in 1953. There had also been an episode of acute arthritis in both knees in 1958. This had responded completely to a short course of steroid therapy.

*From the Department of Ophthalmology, Carle Clinic and Carle Memorial Hospital, Urbana, Illinois.

**From the Department of Internal Medicine, Carle Clinic and Carle Memorial Hospital, Urbana, Illinois.

Physical Examination

Physical examination revealed an obese white male in no acute distress. Temperature was 98° F. Blood pressure was measured 150/85. Bilateral grade 3 periorbital edema was noted together with definite enlargement of both lacrimal glands. Marked engorgement of both parotid and both sub-maxillary glands was noted (figure 1). There were no audible rales, valvular murmurs or abdominal masses. Rectal examination revealed moderate benign prostatic enlargement. No ankle edema was detected, and peripheral arterial pulsations were forceful.

Laboratory Tests

Routine urinalysis was negative. Hemoglobin measured 11.2 grams. Erythrocyte count was 4,200,000 per cu mm and leucocyte count was 6,500, with 70 per cent neutrophilis, 29 per cent lymphocytes, and one per cent eosinophils. Westergren sedimentation rate was 110 mm in 45 minutes. Kline and Kahn tests were negative. Special blood study showed no L.E. cells. Blood chemistry determinations for sugar, urea, calcium, phosphorus and cholesterol were within normal limits. Bromsulphalein test of liver function revealed only 6 per cent dye retention. Serum proteins measured 11.2 grams, and the A/G ratio was 4.2/7.0.



Figure 2
Initial chest x-ray showing the marked left hilar enlargement.

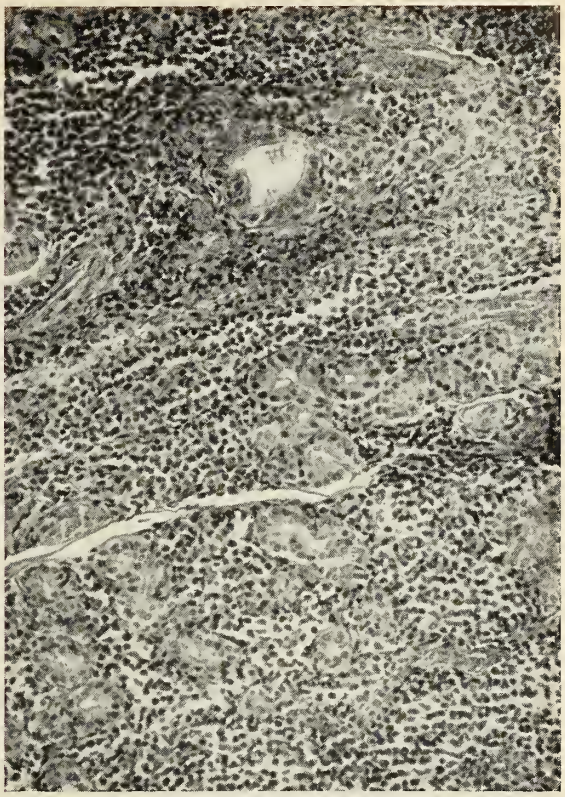


Figure 3
Tissue biopsy showing lacrimal gland ducts embedded in a matrix of lymphocytes. (X 325).

The electrocardiogram was normal. Skull x-ray showed no significant abnormalities. Chest x-ray revealed a large mass arising from the left hilar region with patchy densities in the distal left lung (figure 2). Skin tests with histoplasmin and coccidiodin were negative. With intermediate tuberculin (P.P.D.), a 2 plus reaction was noted.

Diagnosis and Treatment

On February 12, 1960, bronchoscopic examination disclosed no obstructive or mucosal lesions. On the same day a wedge biopsy was taken from the right lacrimal gland and was reported as a "lymphocytic infiltration, diffuse, compatible with lymphocytic lymphosarcoma" by the pathologist. (figures 3 and 4).

On February 22, 1960 the patient was hospitalized for five days for a course of intravenous nitrogen mustard therapy. This resulted in prompt, but only partial, regression of the tumorous tissues.

On April 12, 1960 the patient was rehospitalized for a second therapeutic course of intravenous nitrogen mustards. Some nausea and vomiting were experienced, but there were no adverse hematologic effects. Serum protein determination at that time was 8.7 grams with an A/G ratio 5.1/3.6. Within the next few weeks all lacrimal, parotid, and submaxillary gland enlargement gradually disappeared. The left hilar mass regressed

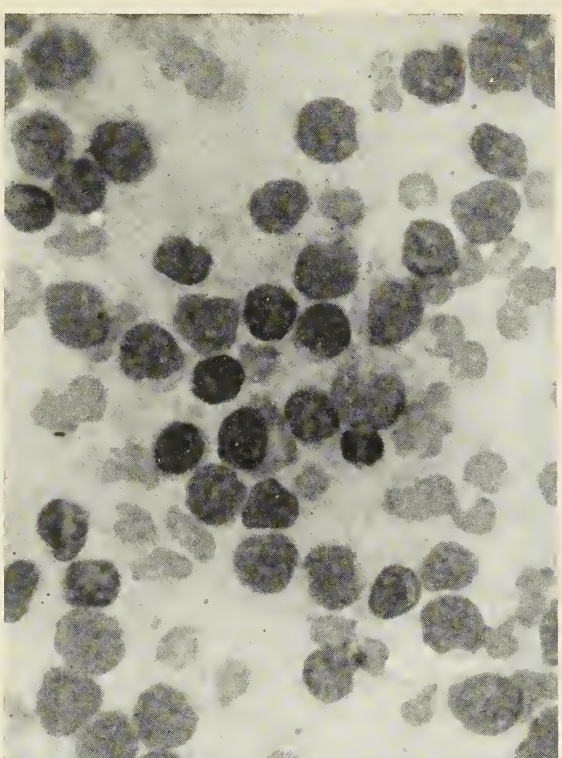


Figure 4
High-power magnification of a touch preparation of the lacrimal gland biopsy showing the structure of the lymphocytes. (X 820).

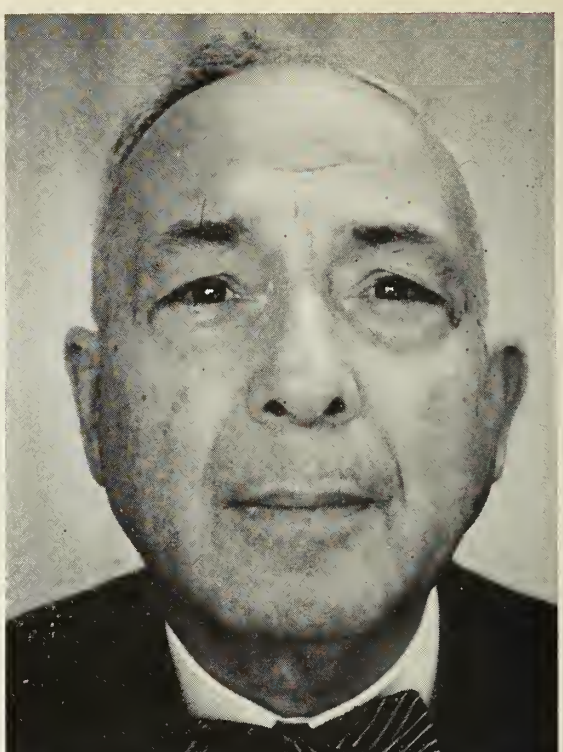


Figure 5
Full-face photograph one year after treatment showing marked improvement.

considerably.

This patient has been consistently well except for his usual seasonal (ragweed) hay-fever. He has maintained his customary weight and strength (figure 6). He has been seen at regular four month intervals. No signs of tumorous recurrence were evidenced until his October 19, 1962 examination. On that occasion he admitted no symptoms and had lost no weight. However, his parotid glands were obviously enlarged, although no lacrimal gland engorgement could be palpated. A chest x ray showed some enlargement of the left hilar mass. Blood counts were normal and the Westergren sedimentation rate measured 72 mm in 45 minutes. Serum proteins were 10 grams with an A/G ratio 4.3/5.7.

It was considered advisable to hospitalize him once more and to administer another course of intravenous nitrogen mustard therapy. Recheck chest x ray on November 29, 1962, showed moderate regression of the left hilar mass. The patient was asymptomatic and his weight was constant. When last seen on August 1, 1963, the patient felt well and the chest x ray was unchanged.

Conclusions

1. A case of Mikulicz Syndrome due to lymphosarcoma has been reported. Both lacrimal, parotid and sub-maxillary glands were involved along with a left hilar (chest) mass.

2. The diagnosis was proven by lacrimal gland biopsy and subsequent histopathological examination.

3. The therapeutic response to intravenous nitrogen mustard has been gratifying.

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Physical Medicine and Rehabilitation in Multiple Injuries

Miland E. Knapp, M.D., *Minneapolis*

Injuries involving multiple areas of the body or multiple organ systems present difficult problems which often tax the ingenuity of the physicians and surgeons caring for them. When severe, they require the cooperative efforts of numerous medical specialties. Spinal fractures may be accompanied by injury to the central nervous system and peripheral nerve roots which result in paralysis not only of the muscular system, but also of the bladder and bowel. The combined efforts of the orthopedist, neurosurgeon, urologist, internist, and physiatrist may be necessary for maximal recovery not only from the physical injury, but also from the social and vocational problems which complicate the patient's life. In addition to the medical specialists, numerous paramedical disciplines are useful or even essential in providing the prolonged and tedious care necessary to the patient's recovery. In this presentation I do not intend to go into aspects of the patient's care other than those related to physical medicine and rehabilitation. However, these are many and require careful solution in cooperation with those who are going to be faced with the after care of the patient.

Immobilization Procedures

In fractures for instance, the type of immobilizing apparatus must be chosen with a view to allowing as much function as possible, at least of the noninvolved areas, when it is obvious that convalescence will be prolonged and problems complicated. Attention to the problems of the urinary system may make the difference between the presence or absence of vocational potential. Care in the acute stage should be intensive and comprehensive so that all phases of treatment are carried on at the earliest possible moment to prevent unnecessary disabling complications.

If recovery will be slow and especially when it may be incomplete, early attention to the details of physical treatment may mean the difference between a helpless cripple and a useful citizen. Unfortunately, the understandable preoccupation of the surgeon with the obvious problems of the trauma during the acute stage of severe injury may lead to neglect of the factors which may produce complications leading to prolongation of disability and delay of recovery. For instance, the need for immobilization of a spinal fracture with paraplegia during the period before reduction or operation may be fulfilled by keeping the patient supine without changing weight distribution for several hours or even several days. This sets the stage for the development of pressure sores which appear several days or even weeks later and may become so severe as to create major problems in treatment or may even result in death.

Diagnostic Measures

Physical medicine and rehabilitation contributes to the patient's welfare from the beginning to the end of his illness.

The diagnostic measures of physical medicine may contribute to a more complete understanding of the patient's problems. Electromyography and electrical muscle testing may determine the type and location of nerve lesions. Measurement

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of range of joint motion and muscle strength testing are useful in analyzing the causes of motor disability. Testing and recording the activities of daily living provides a means of quantitatively following the progress of functional recovery.

In the early stages, physical methods help prevent complications in at least four ways:

1. *Prevention of contractures*—Contractures in the bedfast patient may be prevented by adequate positioning, the use of a bed and mattress which do not allow the patient to assume nonfunctional positions for long periods of time, and by the maintenance of range of motion in all joints. When faced with serious and widespread injury, the first concern should be the type of bed into which the patient is placed. This should be a bed with a firm mattress which will not sag to allow contractures. Probably most common are flexion contractures of the hips and knees which are seen so frequently because a flexed position is a comfortable position and even though the bed may be adequate, the nursing staff may place pillows under the knees for the patient's comfort. Flexion of the knees invariably results in flexion of the hip and if these positions are prolonged for a sufficient length of time, contractures will develop.

An inner spring mattress is a potent cause of disability because of hip flexion contracture. Even though the knees are not bent, the hips will sink into the inner spring mattress, producing a tendency to hip flexion contracture. The proper type of bed is one with a solid base, usually a ¾ inch plywood board placed over the springs to keep the sagging springs from allowing flexed position. On this board is placed a felt mattress or a firm sponge rubber mattress (a compression ratio of 34 pounds to the square inch is satisfactory). This is not only comfortable but also does not sag to produce hip flexion deformity. In my opinion, an inner spring mattress should never be used.

A footboard to keep the patient from developing a foot-drop deformity is extremely useful. We have found the best method is to use a footboard and block the mattress four inches away from the footboard by the use of wooden blocks. In this way, the heel can extend over the end of the mattress distributing the weight on the entire calf instead of on the heel directly. This not only overcomes the tendency to foot-drop but also prevents decubiti of the heels. Contractures of other joints may be prevented by carrying them through a full range of motion at least once daily. This can be done even in the presence of threat to life. It does not require the cooperation of the patient and while it does take some of the nursing personnel's time, it is well worthwhile.

In the conscious patient who can feel heat, hotpacks are useful to help soften fibrous tissue and allow range of motion when limitation of motion has already developed.

2. *Prevention of decubiti*—Decubiti are particularly prone to develop in anesthetic areas, but may develop in any area if the patient is unable to change positions voluntarily. It is important that the patient's body weight be distributed over as much surface area as possible and that the weight bearing should be changed as frequently as possible. Experimental work has shown that some degree of damage to the skin occurs if the weight is on the part for as much as two hours. Therefore, a general rule of changing the patient's position every two hours is a good one, although it would be better to change position even oftener.

When areas are anesthetic so that decubiti are likely, I would advise the use of the sponge rubber mattress rather than a felt mattress, but an inner spring mattress is still contraindicated. If an alternating pressure air mattress is used this should also be on a hard surface, a felt mattress is best, so that the change in pressure will be confined to the skin surface. If the alternating pressure mattress is put on a soft mattress it will press down into the mattress rather than to change the weight distribution of the patient. This type of mattress is useful for the prevention of decubiti if used with the realization that it is only an aid and does not substitute for position changing.

It is also important to keep the areas dry so that maceration does not occur and to maintain good nutrition. The nutritional level of the patient is extremely important because decubiti are fostered by decreased nutrition and particularly by lowered hemoglobin and healing is aided by good nutrition and a higher hemoglobin. If indurated or reddened areas appear, these should be kept from further pressure, and massaged to decrease edema and increase circulation.

3. *Prevention of deconditioning*—Prolonged inactivity of any body tissue tends to cause atrophy and loss of function of this tissue. This is particularly noticeable in muscle but it is true also in other tissues of the body, particularly bone and blood vessels. The best preventative of this is use of the part. In the case of muscles, early active motion of the injured part should be performed, but if this is not possible, at least maximal activity of the muscles of the noninvolved areas should be continued. Muscle activity helps to maintain circulation and bone density as well as muscle strength. Again this may require a great deal of ingenuity on the part of the surgeon in order to allow as much function as possible in spite of the common necessity for immobilization, particularly in the treatment of fractures.

4. *Prevention of mental deterioration*—Prolonged bed rest with inactivity not only interferes with the motor system, but also promotes mental deterioration. Many patients who are forced to lie in bed facing a blank wall for weeks on end will develop an attitude of hopelessness and helplessness which may be difficult to combat. This can be prevented by the mental stimulation which is associated with muscular activity and the patient's morale may be maintained at a high level by providing a program by which the patient can help himself to recover. This may be an exercise program or it may be in the field of occupational therapy where the patient is engaged in strengthening his muscles, increasing range of motion and maintaining circulatory efficiency by working on a project which interests him enough so that he will work with it for hours on end.

Physical medicine is useful not only in the prevention of complications, but also in the later restoration of function. Specific physical treatment may be required for certain specific injuries. Where peripheral nerve injury has occurred, interrupted galvanic or sinusoidal electric muscle stimulation should be employed to maintain contractility of muscle until nerve regeneration reaches a point where voluntary motion is possible. In tendon lacerations, gentle faradic stimulation or carefully guided active exercise may be used to preserve the mobility of tendons within their sheaths until sutured ends become firmly united. When bowel function has been impaired, careful and prolonged training on a timed schedule with suppositories or small enemas to develop dependable bowel habits may prevent many embarrassing accidents. If voluntary bladder control has been lost, automatic emptying may be developed by similar methods employing such stimuli as compression over the pubis, pulling pubic hair or exerting pressure on the bladder by a gloved finger in the rectum.

If the effects of deconditioning have been ignored, it may be necessary to overcome contractures by heat and stretching and to improve muscle strength, endurance and coordination by active motion. When bones or lacerations have healed this treatment may be applied to the affected parts as well as the unaffected extremities.

In the more severely disabled individual, training in activities of daily living including such things as dressing, self feeding, washing face and hands, combing hair, and brushing teeth may require long hours of practice and a great deal of instruction before becoming successful. Transfer from bed to wheelchair and from wheelchair to toilet and back are often possible after many hours of instruction in patients who cannot teach themselves to perform these functions. Ambulation training may be necessary before the patient learns to walk again, either with braces, artificial limbs, crutches, canes, or independently.

During this period of treatment and training the patient may go through successive stages of psychologic problems. In general, the patient at first is depressed because of the severity of the injury. Many times he is convinced that he cannot recover. However, as he sees himself improve with treatment and become a relatively independent individual he becomes encouraged to work harder at his recovery. Occasionally, we see pathologically depressed individuals who are real psychologic problems and occasionally also we are confronted by patients who are unrealistically optimistic about their recovery and who therefore will not work to accomplish this objective because they say, "When I get well I will be able to do that." These individuals are the most difficult of all to treat because you cannot impress upon them the necessity for carrying out the activities which will lead to their recovery.

The ultimate goal of rehabilitation is return

to a useful economic life. Some individuals may recover to such an extent that they can return to their previous employment and this is the goal which we usually prefer. However, many patients are so injured or their work has been of such a heavy physical nature that they cannot return to their previous occupation. This person must be retrained for a new type of work. The individual first undergoes a prevocational evaluation to determine his physical and mental capabilities, including intelligence testing, emotional evaluation, testing for muscle strength and endurance, and testing for manual dexterity. The individual's vocational preferences and desires, of course, must be considered at the same time. When the patient's capabilities and desires have been explored a new occupation is selected which will fit these capabilities. Then he must be trained in this occupation.

Usually this is done by sending him to some type of school or on the job training which is accustomed to training individuals for this work. (There are some institutions where handicapped people are trained exclusively such as the Bulova school of watch making.) These are usually located in the larger population centers and are not available to everyone. Finally, when he has been trained in this occupation it is extremely important that he actually be placed in a job. I find that the whole rehabilitation process breaks down at this point more often than anywhere else. It is difficult for a handicapped person to sell himself to an employer or even to get to the employer to attempt to sell himself. Many patients do this successfully, of course, but in many instances an employable person is denied employment because of this problem. Sometimes it is necessary to place the individual in a sheltered type of employment where he can be supervised or assisted or have equipment available to help him adjust to employment. Some individuals never get beyond this stage, but the majority can return to competitive employment if the individual is fitted to a type of work for which he is qualified and in which he is interested. The general experience of vocational rehabilitation is that handicapped persons actually have less absenteeism than the non-handicapped and where employers may have been hesitant about employing them they often become enthusiastic because of the desire of the handicapped to prove his worth.

Summary

Injuries involving multiple areas or organ systems present difficult problems. They require the cooperative efforts of numerous medical specialties and paramedical personnel to provide the prolonged and tedious care necessary. Physical Medicine and Rehabilitation aids recovery from beginning to end and attention to the details of physical treatment may mean the difference between a helpless cripple and a useful citizen.

The contributions of Physical Medicine and Rehabilitation may be summarized as follows:

1. Diagnosis
   a. The type and location of nerve injuries may be determined by electromyography and electrical muscle testing.
   b. Measurement of range of joint motion and muscle strength testing help evaluate disability.
   c. Testing activities of daily living measure degree of practical functional recovery.
2. Prevention of Complications
   a. Contractures in the bedfast patient may be prevented by adequate bed preparation, maintenance of range of motion in all joints, and the use of hot packs when limitation of motion begins.
   b. Decubiti are prevented by distributing body weight over as much surface as possible, changing position every two hours, massage on indurated areas, keeping the areas dry, and maintaining good nutrition.
   c. Deconditioning is prevented by early active motion, not only of injured parts, but also of noninvolved areas.
   d. Mental deterioration is prevented by the mental stimulation of activity and morale maintained by providing a program of self-help that the patient can work on. Occupational therapy is especially valuable for this.
3. Restoration of Function

   This is accomplished by overcoming contractures and improving muscle strength, endurance, and coordination. The methods used are heat, massage, stretch, and active exercise, either through physical or occu-

pational therapy. For the more severely disabled, training in activities of daily living, including ambulation, dressing, feeding, wheelchair transfers, etc. are important.

4. Vocational Rehabilitation

Finally, for those individuals who are capable of returning to work, rehabilitation is essential. Sometimes the patient can return to his previous occupation with or without adaptive devices, but sometimes he must be retrained for a new type of work. This is accomplished by prevocational evaluation, the selection of a new occupation which will fit his capabilities, training him in this occupation and then, and most important, actually placing him in a job.

The View Box

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital

This 60-year-old carpenter complained of fainting spells while working. Close questioning revealed that this usually occurred after vigorous use of his left arm in which he used a hammer. He had no other complaints.

Physical examination revealed a well developed, well nourished male. The blood pressure in the right arm was 145/80 mm Hg. and in the left arm 95/80 mm Hg. All peripheral pulses were strong except in the left arm, where they were barely palpable in the axilla, antecubital fossa and radial area. Neurologic examination was entirely normal.

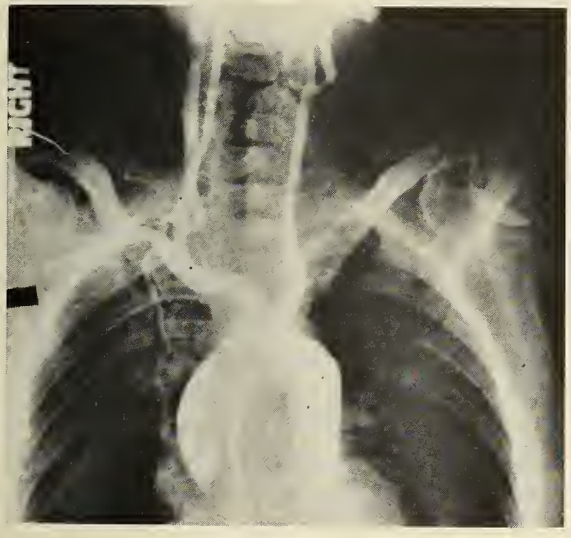


Fig. 1. 1½ sec.

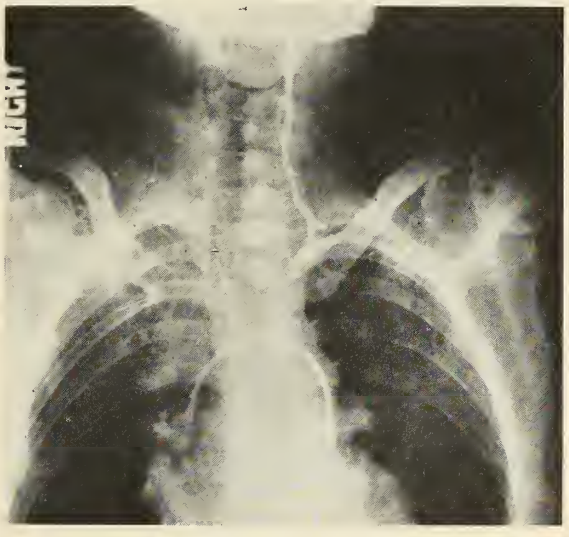


Fig. 2 4½ sec.

What is your diagnosis?

(Continued on page 40)

Detecting Unknown Diabetics in the Community

Kenneth Keeton, M.D., F.A.C.P., and Wayne Messick, M. P. H., Quincy

This article describes how four health agencies conducted the first blood screening program in Illinois.

A case finding program, including final diagnosis by the family physician, may be judged by its success at follow-up. An evaluation of the Adams County Diabetes Detection Drive, held during the fall of 1960, revealed that twenty-eight (28) previously undiagnosed cases of diabetes mellitus were found and are now under the care of their physicians. The project is an outstanding example of agency cooperation and was the first of its kind in the state of Illinois. It was co-sponsored by the Adams County Health Department, Adams County Medical Society, St. Mary's Hospital, and Blessing Hospital.

A total of 2,395 adult citizens and relatives of diabetics were screened. The Wilkerson-Heftmann blood sugar screening test was employed. Of this number 136 citizens were referred for further evaluation and follow-up to the physicians indicated on their registration card. Only those persons with blood sugar above 160 mg. % at the time of screening were referred. This level of screening was determined by the Diabetes Committee, Adams County Medical Society.

A joint committee for the project, with representatives from each sponsoring agency, was organized and was given the responsibility to promote and conduct the drive.

A total of sixteen, two-hour testing centers were held . . . seven in the rural areas of the county and nine in Quincy. Five evening sessions were held.

In rural areas each center was sponsored by a local club or organization. Their responsibility was that of promotion, providing of volunteer workers, and obtaining of necessary facilities. Organizations sponsoring programs included Home Bureaus, Parent-Teacher Associations, Lions Club, Church groups, and Legion Auxiliary. This technique insured community participation and success.

Each center, a unique example of teamwork, was in the charge of a public health nurse, assisted by the supervising nurse. Her team for each center consisted of two to four laboratory technologists; the public health educator; three to seven volunteer women to handle registration, wash glassware, and clean up. (Nurses and laboratory technologists in the community, not currently employed, were also recruited on a voluntary basis.) This team tested an average of 150 persons per two-hour screening session, with a low of 96 and a high of 243.

Assistance from the Division of Hospitals and Chronic Illness of the Illinois Department of Public Health aided greatly in making the program possible. The testing machines, glassware, and reagent tablets were provided by this office. Consultants from the Region V Office, U.S. Public Health Service, Chicago, also aided in helping develop necessary forms, provision of pipettes, and aided in planning promotion of the drive. All other costs were paid by the Adams County Health Department.

Results of the entire project are recorded in Table 1. The one new case of diabetes found in the 20-44 age group was over forty years of age;

Diabetes Committee, Adams County Medical Society.

Diabetes Program Coordinator, Adams County Health Department.

TABLE I

Summary Report

Screening Location

Adams County Diabetes Detection Program

Wilkerson-Heftmann Method

Age Group	Total Screened		Negatives		Positives		Referred to M.D.		Not Diabetic		Diabetic Diagnosis						Undetermined				Relative of Diabetic		Parent of Big Babies	
											New		Old		No M.D. Report		Patient non-coop.		Other					
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Under 20	44	29	44	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	26	-	-
20-44	503	225	495	217	8	8	8	8	6	7	1	0	1	1	0	0	0	0	0	0	174	76	100	26
45-64	723	274	678	255	45	19	45	19	27	10	8	7	3	2	0	0	1	0	6	0	199	61	112	21
65-74	318	151	292	139	26	12	26	12	18	4	4	5	2	3	1	1	0	0	0	0	76	31	72	22
75-84	71	46	65	36	6	11	6	11	7	6	0	2	0	1	0	0	0	0	0	1	17	7	10	4
85-Over	7	4	6	3	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	-	-	3	1
Sub-Total	1666	729	1580	679	85	51	85	51	58	27	13	15	6	7	1	1	1	0	6	1	503	201	297	74
Total	2395		2259		136		136		85		28		13		2		1		7		704		371	

thus, it can be said that all new cases of diabetes discovered in this program were forty years of age and over.

Efforts to bring in those citizens most likely to have diabetes were worthwhile since approximately two-thirds of the group were 45 years of age or older. Also, almost 1100 persons were blood relatives of diabetics or the parents of babies weighing nine pounds or more.

The ratio of referrals to family physicians—because of a blood sugar over 160 mg. % to total cases diagnosed was considerably higher than expected. Also there was a wide variation by sex, the females having a greater proportion of referrals to cases than the males.

Yield of new cases for the males was exceptionally high—2 per cent—although age distribution, risk groups and percent followed to diagnosis differs little from the female groups. The follow-up reports by physicians with only ten cases "diagnosis undetermined" is an outstanding example of physician interest in this casefinding program. Of these ten, one person was classified as non-cooperative; two are out of county residents; and the other seven persons as yet have not visited their physician.

No program can be expected to succeed if the population isn't sufficiently informed. In order to test the effectiveness of the promotion part of the program, it was decided by the committee that an evaluation of how people heard about the survey be conducted. Thus, each person registering for the screening test was asked, "How did you hear of this survey?" A number of promotional techniques to be used were outlined at the beginning of the drive. One new technique, namely that of asking a number of health, welfare, and religious organizations to take leadership in promoting this program, was employed. They were asked to refer adult citizens to be screened. A referral slip was developed for their use. It specified the time and place of test and constituted an appointment. Because of the early acceptance of the program by the citizenry, this plan had to be curtailed. Nevertheless, it was the second most effective method of promotion. A review of the data in Table 2 shows to what extent each health education technique was effective. It should be pointed out that several communication methods were given by many of the participants, but only the first one mentioned was tabulated.

TABLE 2

Tabulation of Diabetes Survey: Adams County

Question: How Did You Hear of This Survey?

Total Count	Percent	Communication Method Used
1119	46.7	Newspaper
502	20.8	Organization & Agency Referrals
209	8.7	Radio
184	7.6	Health Department (staff, letters, posters and advertising)
157	6.5	Television
155	6.5	Grapevine Method (includes friends, relatives, neighbors, telephone, etc.
51	2.1	Business or Employers
18	0.8	Others

By and large a community diabetes program may be regarded as successful if it makes progress towards the following objectives:

1. Finding unrecognized diabetics and following them up to assure diagnosis and treatment, by their family physician.
2. Promoting the understanding of diabetes through education of the patient, his family, professional groups, and the community as a whole.
3. Helping to mobilize community services in the interest of diabetics.

In view of the above criteria it is recommended that the sponsoring agencies take steps to initiate a continuing diabetes program:

1. Organize a series of educational classes for the diabetic and his family. Outline of series should be prepared by the joint committee and content should be medically approved.
2. The screening program should be continued on a routine basis and not on a campaign basis. For example, the program should be held at least once monthly in the city of Quincy and at least once annually in the rural areas of Adams County. This would insure a continuing educational program on diabetes and would disperse the work of conducting the program and follow-up by the physicians.
3. Casefinding programs should be limited to those citizens forty years of age and over, and to relatives of diabetics, regardless of age. Known diabetics should not be included.
4. The screening techniques employed for this drive should be continued (Wilkerson-Heftmann blood sugar screening, capillary bloods, 160 mg. %).
5. Continue the educational phases of this program. It is known that a number of new cases of diabetes were found by the family physician when citizens responded to the health education program by going directly to their doctor.

The sponsoring agencies can rightfully be proud of their cooperative efforts in conducting the first diabetes blood screening program in Illinois. The leadership exercised by the medical profession proves without doubt that preventive medicine is an important phase of their work.

The View Box

—diagnosis and discussion *(Continued from page 37)*

Diagnosis: Stenosis of the proximal subclavian artery.

The patient had a catheter passed up the right femoral artery to the level of the aortic arch. 50 cc. of 75% Hypaque was injected under pressure. Rapid sequence filming was done, and at 1½ seconds we visualized the innominate artery with complete outline of the right subclavian, vertebral and common carotid arteries (note plaque at its bifurcation). On the left, we visualized only the common carotid with a plaque at its bifurcation. There was no visualization of the vertebral or left subclavian arteries. At 4½ seconds, reversed flow was noted down the left vertebral artery, fed from the enlarged right vertebral artery through the vertebrobasilar junction. There was filling of the distal left subclavian artery and its branches in this fashion. Collateral through the thyrocervical trunk branches was also noted.

Stenosis of the proximal subclavian artery apparently produces a distal lowering of the blood pressure sufficient to force the vertebral artery to function as a source of collateral arterial supply to the upper extremity, thus draining away a significant portion of the cerebral blood flow normally contributed by the basilar arterial system, which probably accounts for periods of cerebral anoxia with vigorous use of the involved extremity.

Left subclavian endartectomy relieved all the patient's symptoms.

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Drug Programs of the AMA

Hugh H. Hussey, M.D., *Chicago*

The physician today needs, more than ever before, a source of authoritative, unbiased, and current information—readily available—on new developments in drug therapy. The AMA drug information program is intended for that purpose.

Even at an early stage, where the results of early clinical trials appear to warrant more extensive trials, but when it is not yet known whether the new compound will become a new product, the American Medical Association has an interest in it, and a responsibility. This involves the need to avoid future confusion about identification of the compound if it becomes a therapeutic agent. It is of the utmost importance that a potential drug not become known by an inappropriate name, or, even worse, by several names, since this makes it extremely difficult to correlate the information from various sources, and may create an almost hopeless situation for the practicing physician. Early efforts of the Council on Drugs to cope with this problem were often frustrated.

However, in 1961 a cooperative AMA-USP Nomenclature Committee, staffed by the AMA was established. This Committee also collaborates with the World Health Organization, British Pharmacopoeia, French Codex, and the Nordica Pharmacopoeia in an attempt to adopt names acceptable to all. The Committee proceeds on the premise that an appropriate name should be as short as possible, but should still give some indication of the drug's chemical composition. In addition, classes of drugs should be identifiable as such, and care should be taken to avoid names that may lead to confusion with other names. As an aid, the Committee formulated a set of "Guiding Principles for Coining Nonproprietary Names." The USP has agreed to use the names adopted through the services of this Committee and, with the entry of the APhA into membership in the Committee in 1963, the National Formulary will also do so.

The objective of the Nomenclature Committee is to select such suitable nonproprietary designations, known as United States Adopted Names (USAN), for chemical compounds or other identifiable substances of potential therapeutic usefulness at an early date, and to encourage their use thereafter in all medical and other scientific literature.

This program has had noteworthy success; in its first two years of operation, more than 250 nonproprietary names (USAN) were formally adopted. Perhaps of even greater importance is that these USAN have tended to be more appropriate than those of earlier vintage. They receive rapid and widespread dissemination through the monthly NEW NAMES column which appears in JAMA and which is now reproduced in about 12 cooperating medical and pharmaceutical journals. In addition, the American Pharmaceutical Association has published file cards for all of the individual nomenclature statements which have appeared in the NEW NAMES column, and the United States Pharmacopoeia has published a cumulative list of USAN through 1962.

The AMA has a second interest in the newly developed compound as soon as the manufacturer submits to the Food and Drug Administration a new drug application. At that time the Council on Drugs requests the same scientific data (pharmacologic and clinical studies) from the manufacturer for its review and evaluation. The most critical moment in a new drug's his-

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tory occurs after the Food and Drug Administration has approved a new drug application for only when the manufacturer introduces it on the market will this new drug really be tested in all types of patients, and in a wide variety of clinical situations. Only when physicians so use a drug over a period of time will the true dimensions of its effects, both good and bad, be revealed.

When a physician chooses to prescribe a new drug, he makes his selection from among all the older drugs that he knows well and, on the basis of claims for its possible superiority, with the hope that his patient will be benefited. But, that hope should be based on a rational choice, which in turn, should be based on proper and deliberate evaluation of the available information. Inasmuch as the physician lacks the time to evaluate all information about new drugs, the Council on Drugs bridges the gap between the legal permission granted by the Food and Drug Administration to a manufacturer to market a new product and the individual moments of choice when physicians prescribe it.

Experts selected by the Council on Drugs review the data, consider and appraise the available evidence, and submit their opinion concerning the adequacy of the data, and the effectiveness and safety of the drug. This opinion serves as a basis for a Council statement, which is published to assist the physician in deciding about use of the new drug. Although the evidence available to the Council is essentially the same as that submitted to the Food and Drug Administration, the Council examines it from a different point of view.

Preliminary statements based on the Council's evaluation of the data received from the manufacturer, as well as on other published and unpublished reports available at that time, are published in JAMA. They are published as soon as practicable after a drug first becomes available commercially and when it is being detailed to physicians and pharmacists. Through a process of continual and reasonably complete accumulation and utilization of the additional information, which inevitably becomes available during the first several months of general use of a new drug, a "continuing process of education" is implemented by the publication of additional Council statements containing pertinent facts and results of continuing evaluations.

The Council's statements of opinions are transmitted to the physician also in the Council's annual publication.

New and Nonofficial Drugs

An important part of the Council's over-all Drug Information Program is its activities in the area of adverse reactions to drugs. After several hematologists in late 1952 observed that damage to the blood and blood-forming organs was associated, in some cases, with the administration of chloramphenicol, the Council established a Committee on Blood Dyscrasias. The purpose of the Committee was to establish a Registry to receive reports of drug-induced blood dyscrasias, and alert physicians to the potential hematopoietic toxicity of drugs. Reports are submitted voluntarily by interested physicians and in addition, a systematic attempt has been made to include reports abstracted from the foreign literature. The Registry has had a steady growth and by the end of 1962 it contained 1,387 domestic reports and 526 reports from the foreign medical literature in which a total of 465 drugs and other chemical substances were associated with the development of blood dyscrasias. The reports are transmitted to the members of a Study Group consisting of hematologists who consider the possible causal relationship between the dyscrasia and the use of the drug. The Study Group also decides whether there is need for publication of a cautioning statement. Cumulative tabulations of all reports have been made semi-annually and are distributed to interested individuals and institutions.

The Registry accepts reports based on circumstantial evidence, and such reports do not prove that the drug in question and the associated blood changes are causally related. Obviously, the fact that the name of a drug appears in the tabulation does not necessarily mean that the drug is harmful or that it was responsible for the dyscrasia reported. Furthermore, the reports received by the Registry may represent only a small part of the potential total number of drug-related blood dyscrasias which might occur, and the fact that the name of a drug does *not* appear in the tabulation does not necessarily mean that the drug is devoid of the potential for hematotoxicity.

More recently the Council recognized that this system should not be limited to reports on blood dyscrasias only, but that it should be expanded to include all serious adverse reactions to drugs, pesticides, household and economic chemicals. Accordingly, late in 1962, a preliminary meeting was held to explore the problems involved in organizing and operating a central registry on adverse reactions. As a result of that meeting, the Registry was formed. By May of 1963, panels of experts were selected from the various disciplines of medicine to encompass the following areas: Allergy, dermatology, gastroenterology, hematology, household and economic chemicals, nephrology, neurology-psychiatry, and pediatrics.

Since the organization of the panels, a report form has been devised and, in an effort to expand its program, the Registry is enlisting the help of physicians in reporting cases. The proposed report form is a self-mailer and provides an original report for the Registry and a duplicate copy which may be retained with the physician's records. On the reverse side of the duplicate copy is a suggested list of some of the more common drug-associated reactions which is provided simply as a guide and is not intended to serve as a comprehensive reference.

The Registry is interested in reports of all reactions which are not ordinarily associated with a specific therapy or which may be considered unusual or serious but does not ask for reports where the reactions may be considered an extension of the effect for which the drug was given, e.g., insulin shock or bone marrow depression following treatment with alkylating agents.

Through cooperative arrangements with other agencies and organizations, attempts will be made to coordinate the reporting by physicians of adverse reactions in order that the AMA may serve as the clearing house for such information.

In the complexities of the prevailing picture of activities under the new drug regulations, it has become more important than ever that the American Medical Association establish liaison and maintain contact with all interested parties, particularly with the Pharmaceutical Manufacturers Association, the Food and Drug Administration, and the Congress of the United States. In the instance of PMA, through the Medical Section, we have had notable success, and there are indications that, with greater effort, there will be equivalent success with FDA.

It is evident that all four parties—AMA, PMA, FDA, Congress—are interested in (1) having safe, effective new drugs reach the market, (2) insuring effective flow of information about the pharmacologic and therapeutic properties of drugs; and (3) detecting, evaluating, and publishing the fact about adverse reactions to drugs. A variety of motives are involved in these interests, including desire for scientific truths, protection of the public, and financial profit.

All four parties are involved in one way or other with all motives but not to the same extent with each motive. Consequently, the attitude of each of the parties differs somewhat from that of the others.

If an attempt is made to discern the motive that is most influential for each party, the results appear as follows:

AMA—Scientific Truths

PMA—Financial profit

FDA, Congress—Protection of the public

For FDA, because of its responsibilities as a regulatory agency, there has been a tendency for the prime motive (protection of the public) to be transmuted into self-protection. And, in the case of Congress, there may sometimes be other motives than the three I have chosen to examine.

Immature Argentaffinoma of Appendix in a Child

Richard C. Powers, M.D., Isa Sejdinaj, M.D.,
Edward Tootson, M.D., Leonard Hurley, M.D.

In more recent years, the term *argentaffinoma* has come to be employed more frequently for the unusual pathologic entity previously referred to as "carcinoid." Oberndoerfer, in 1907, first introduced the latter term. Since that time much has been written about this interesting tumor. In that time, however, there have been only three cases reported[2] of the occurrence of appendiceal argentaffinoma in children 10 years of age and under. It appears that this report is the fourth case report of argentaffinoma of the appendix occurring in a child of this age group.

Case History

T.H.W., a 10-year-old white boy, was brought to the emergency room of Sherman Hospital in Elgin, Illinois, with a six hour history of abdominal pain. The pain was only of moderate intensity. It started in the right lower quadrant, and it had persisted in this same area until the time of initial examination. The youngster had eaten nothing during this time, and although nauseated, had not vomited.

The parent had observed that the youngster had been walking in a stooped position, and had been sitting with his legs flexed on his abdomen to obtain some relief from the pain. There was no past history of a similar episode. The youngster had been in otherwise entirely good health for the first 10 years of his life. It is interesting to note that the boy's father stated at the beginning that his son had appendicitis. This remark was based upon the fact that the father had passed through an exactly similar experience with another son a short time prior to this.

Physical Examination

The boy was well developed and well nourished. He appeared moderately ill, and lay on a table with his legs flexed on his abdomen. All of the positive physical findings were limited to the abdomen. The temperature was 99.6° F, and the pulse was 94. Examination of the head, neck, lungs, and heart proved negative. There was a distinct tenderness in the right lower quadrant of the abdomen, but there was no associated voluntary or involuntary rigidity. No mass was detected in the abdomen There was no distention. Bowel sounds were of normal quality. No hernial defect was present. The genitalia were negative. On rectal examination, there was some tenderness in the right side of the pelvis.

Laboratory findings

Complete blood count revealed a hemoglobin of 14.5 grams, an hematocrit of 41 per cent, and a white blood count of 7,100, with 62 polymorphanuclear segmented cells and eight stab cells. Examination of the urine was negative.

Hospital Course

In spite of the diagnostic impression of the father, it was elected to admit the youngster for further observation. On the following morning the patient had less pain in the abdomen, and he was able to tolerate liquids by mouth. A nagging discomfort in the abdomen continued. Thus at 36 hours he was evaluated again. The vital signs at this time were all in a normal range, and the white blood count had remained in the almost identical range as the first count. However, the boy still had point tenderness in the right lower quadrant of the abdomen, and he was unable to straighten up because of the persistent pain. Therefore, a laparotomy was done. The gross findings were consistent with a moderately advanced acute appendicitis involving the distal third of the appendix. Routine appendectomy was done. Recovery from the operative procedure was uneventful. Because the pathology report was unusual, it will be given here in its entirety.

Pathology

The submitted specimen was a vermiform appendix measuring 9.8 cm in length, and up to 8 mm in diameter. The wall measured up to 3 mm in its greatest thickness.

Multiple sections showed a patent lumen, and opaque

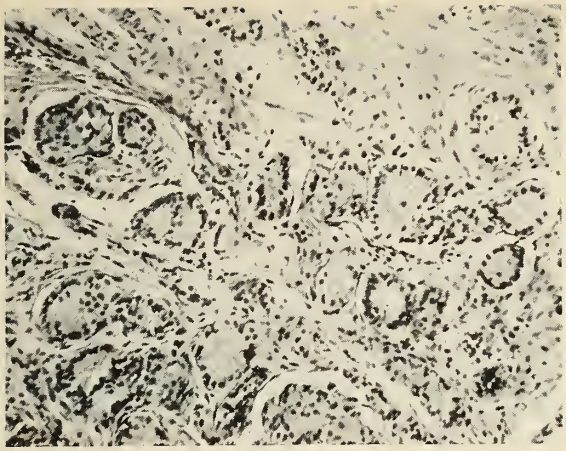


Figure 1
The bulk of the tumor was comprised of sheets and nests of neoplastic cells.

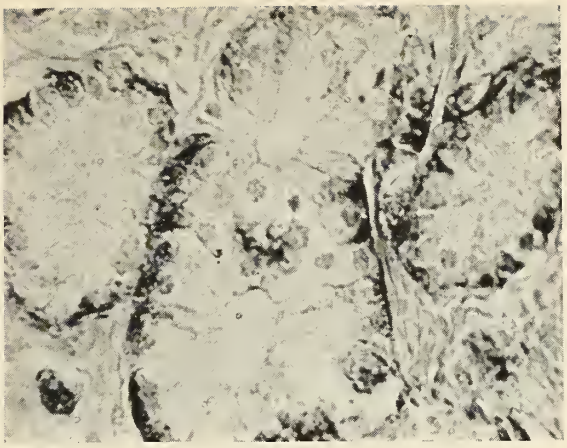


Figure 2
High power (440X) revealed uniform cells containing hyper-chromatic nuclei.

yellow tissue in the distal one cm of the specimen. This extended through the entire thickness of the wall.

Microscopic examination of cross sections and longitudinal sections of the appendix showed orderly glandular and lymphoid tissue and muscularis. Sections from the distal portion of the specimen showed sheets and nests of neoplastic cells extending from the mucosa through the muscularis to the serosa (Figure 1). There were groups of uniform cells containing hyper-chromatic oval nuclei, and faintly basophilic cytoplasm with indistinct cell membranes comparable to the usual pattern of argentaffinoma seen in the adult (Figure 2). In addition, there were many small glands with empty lumina lined by larger cells, each with a basal nucleus, pale cytoplasm and distinct cell membrane.

The mucicarmine and alcian green stains for mucus were negative. The argentaffin stain was strongly positive, with many granules located at the base of the glandular cells and scattered diffusely through the cytoplasm of the nests of more typical adult argentaffin tumor (Figure 3). There was acute inflammatory reaction over the congested and edematous serosal aspect. The diagnosis was argentaffinoma (immature type) of the distal appendix, extending through the entire wall to the serosal aspect, with acute periappendicitis.

Discussion

The entodermal intestinal tracts of the embryo and neonate lack argentaffin cells. These cells develop or mature in early childhood—perhaps around four or five years of age. The age at which the cell density of the adult is reached is unknown.

The argentaffin or chromaffin cells apparently arise from Kultschitzky's cells at the base of the glands of Lieberkuhn. The typical argentaffinoma of an adult is characterized by rather uniform cells which are arranged in sheets and nests extending from the mucosa through the entire thickness of the wall and into the serosal tissues of the appendix. In some few cases there is metastasis to the regional lymph nodes.

Approximately 60 per cent of all argentaffinomas of the gastrointestinal tract arise in the appendix. Approximately 90 per cent of all neoplasms of the vermiform appendix are argentaffinomas.[6] Distinct gland formation is not commonly seen. Chrome and silver salts stain granules within the cytoplasm. In addition, there is distinct yellow lipochrome pigment present within some of the cells.

This particular neoplasm characteristically

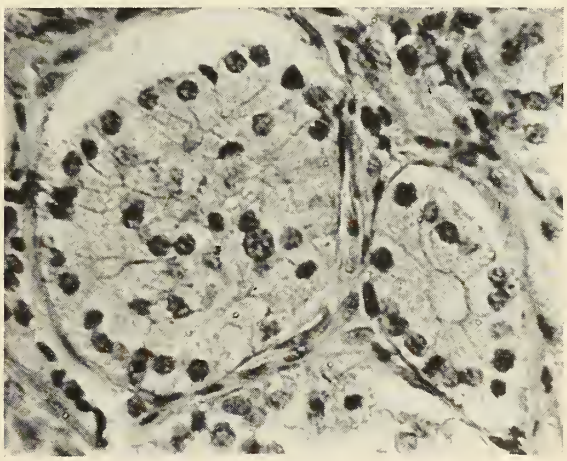


Figure 3
The argentaffin stain showed many granules located at the bases of the glandular cells (440X).

has a slow growth pattern over many months or years, extending slowly and metastasizing reluctantly in the unusual case. Production of sufficient quantities of serotonin to give clinical symptoms or to be discovered by the usual laboratory procedures does not occur in argentaffinomas limited to the appendix.

In this reported case of argentaffinoma in a 10 year old boy, the neoplasm showed extensive and well developed positive staining with silver salts. The formation of orderly glands throughout the tumor seemed an unusual finding when compared with the usual pattern seen in adults. It is suspected that this represents an early pattern of a developing argentaffinoma, more immature than that usually seen in the typical adult case. Over a period of months or years (if clinical symptoms had not resulted in surgical intervention) this lesion probably would have matured into the more classical adult pattern. The paucity of similar cases in children make this postulate difficult to pursue.

It is known that the histologic pattern of neoplasia in children varies from that seen in adults. Some innocent lesions, such as "juvenile melanoma," adenomatous polyp of the colon, and capillary hemangioma appear quite ominous. It is hoped that other cases of argentaffinoma seen in children will be examined and reported as to maturity of the lesion in comparison to that usually seen in the adult.

In a review of the literature by Field, et al,[2] there were 19 cases of argentaffinoma reported in patients 16 years old or under. Fifteen of these were located in the appendix, two in the ileum, one in the stomach, and one in a Meckel's diverticulum. Of these 15 argentaffinomas of the appendix, only three cases were found in children below the age of 10. Previous reference has been made to the fact that the manifestation of these tumors in the appendix is that of acute appendicitis.[5] The definitive diagnosis is established as a coincidental finding upon microscopic examination of the surgical specimen.

According to Landing[3], appendiceal carcinoid represents approximately one in 500 surgically removed appendices up to the age of 16. In our opinion, this figure seems too high, in view of the number of cases reported to date. The recommended treatment is simply a routine appendectomy. In the instance of spread to the regional lymph nodes, a more radical procedure, such as right hemicolectomy, would have to be considered.[1]

Summary

A partial review of the literature relative to argentaffinoma of the appendix is presented. Specific reference is made to this disease occurring in children below the age of 10. A report is made of such a case, the diagnosis being made incidentally upon an appendix removed for acute appendicitis. The pathology and histologic criteria are discussed in detail.

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Accidental Administration of Compazine

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The reporting of this case is included to alert all physicians to still another of the many emergencies that may happen in a pediatric practice. An error in treatment may be catastrophic to the child, whether it be an error in the compounding of a prescription or the amount given to the patient. It is even more terrifying when an entirely wrong medication is given; e.g., when the child received a medication intended for a parent.

Case History

An 18-month-old female, 21 pounds 6 ounces, was first seen on May 23, 1961, with elevated temperature, cough, cold and vomiting. Her temperature was 102.2 rectally. She had a mild corzya, infection of both tonsils with a white exudate from the crypts of each tonsil. The anterior cervical nodes were slightly enlarged. Owing to the vomiting, it was suggested that the child be given only small quantities of clear liquids, popsicles and pieces of sugar candy, but no oral medication. The mother was instructed to use aspirin suppositories, one every six hours of the day, for the temperature elevation. An injection of 400,000 units of Penicillin was administered. Eighteen hours later, at 9:00 a.m. the next morning, the mother reported that the temperature was normal and the baby had not vomited since the office visit. The clinical progress was apparently satisfactory. It was suggested that she now start oral medication (one-half teaspoon every three hours Pediatric Suspension of Gantrisin), in the hope that this dose would be tolerated.

At 10:00 a.m. the mother telephoned in alarm because she noticed that when she was about to give the fourth scheduled aspirin suppository, only one was missing from the box. On questioning the other members of the family, who gave the other suppositories, it was ascertained that the child had received two prochlonperazine (Compazine®) suppositories, a total dosage of 50 mg.

One-half an hour later, at 10:30 a.m., the mother noticed that the child was in a head back position and that the eyes were rolling around. She called and we met at the hospital approximately one hour later. Upon admission to the hospital, the temperature of the child was 101.6 rectally. She was making facial grimaces and purposeless movements of her arms and legs. She lay on her side in an opistonthonus position and her eyes were rolled upward in their sockets. Her throat was still inflamed and the cervical nodes were still palpable. In view of the history and the physical findings, a lumbar puncture was performed. It revealed a clear fluid and normal pressure. The chemistries showed the protein to be 14.5 mg% and the glucose to be 50 mg% The Pandy was negative and the cell count was 2 lymphocytes/cc. The blood and throat culture showed no growth by aerobic and anerobic methods. Routine urinalysis was negative; but the urine did show a positive Compazine test. The complete blood count was normal including a normal differential count. She was maintained on small chemotherapeutic (Gantrisin®) doses and added antihistamine (Benadryl®) medication.

Clinical improvement was shown. In forty-eight hours there was not much change in her condition from the time of admission. After an additional twelve hours she finally returned to normal. This delay might be explained by the fact that this medication was given rectally, a route by which the absorption is slow and the action prolonged. She was discharged from the hospital after five days, completely recovered.

Prochlorperazine (Compazine®), a phenothiazine derivative, is an outstanding tranquilizer and antiemetic that is remarkably free from the drowsiness and depressing effects. The vast clinical reports show that it is rapid-acting and quite effective in low dosage. Side effects in these low dosages are minimal. The mother of the patient had had prochlorperazine suppositories, 25 mg, prescribed for her nausea of pregnancy over one year ago and had left them in the refrigerator. When the aspirin suppositories were prescribed for the patient, they were stored in the refrigerator next to the mother's prescription for suppositories. Late at night or early in the morning the child described in the above case report was given the wrong suppository and the train of events began.

Prochlorperazine does not have any particular potentiating effects. Depressant drugs given in conjunction with it should be watched very carefully. Occasionally transitory neuromuscular effects of an extra-pyramidal tract pattern have been observed on Compazine therapy. These resemble mostly a Parkinsonian Syndrome or are of the dystonic type. In the latter type, the

muscles of the face and shoulder girdle seem to be affected the most. Characteristically, the symptoms are intermittent. Others symptoms that have been observed include extension rigidity of the back muscles, spasms of the neck, carpopedal spasm, eyes rolled back, trismus, and difficulty swallowing. All of these symptoms occurred at one time or the other during the first 56 hours.

Prochlorperazine has two particular uses in Pediatrics.

1. Nausea and vomiting syndromes.
2. Behavior disorders—reducing excitability and hyperirritability.

Three points should always be kept in mind before the administration of Prochlorperazine in children.

1. Start always at the lowest recommended dosage level.
2. Dosage should always be based on body weight, 0.5 mgs./kg./24 hours, rather than age.
3. And, it is always important that parents clearly understand your dosage instruction.

There has only been a very few cases of neuro-muscular reactions (Extrapyramidal symptoms in children). These reactions are transitory and reversible. Nausea and vomiting syndromes are usually controlled by low doses below 7.5 mg. a day for a 20 to 29 pound child.

High doses are tolerated in behavior disturbances, but one must always begin with low doses. Although extensive clinical experience has long since demonstrated that Compazine has an unusually wide margin of safety, the physician administering the drug should remain alert to the possible occurrence of blood dyscrasia or other toxic manifestations which have been reported occasionally with the phenothiazine compounds.

Despite some similarity to serious neurological disorders, these reactions are reversible, by careful observation and mild sedation, if necessary. Reassurance is an important part of the therapy. It has been suggested that antihistamine therapy may be helpful. It was used on this child and she made an uneventful recovery. Time may have been a great factor in this particular case.

In summary, this case represents a serious mistake of medication that fortunately does not happen too frequently in our every day practice. This child had an acute tonsilitis, received the wrong medication accidentally, but made a very uneventful recovery and has not suffered any serious after effects. At a month and three-month interval after this accident, she has been examined with no discernible residual effects of the mistaken drug administration.

Qualifications of the Flight Surgeon

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I have often been asked by medical colleagues, "What is a flight surgeon and how does his particular knowledge differ from other disciplines of medicine?". In my humble opinion, the sum total of all the flight surgeons knowledge, is directed toward one purpose, namely, the prediction of who can fly, how he may fly with safety, and how to correct difficultics that occur as a result of his aeronautical or astronautical activities.

Starting at the ground level, a flight surgeon should have adequate knowledge of air field facilities. He should understand the principles of preventive medicine in all types of climate and terrain. This requires knowledge of engineering as well as medicine. Project this thought into space and he must think in terms of space platforms as well as permanent installations on the moon, etc.

He should understand the principles of aeronautical and astronautical flight. This requires knowledge of aeronautical enginecring as well as medicine, ie; cockpit design, in terms of the optical, cardiovascular, skeletal, muscular, neuropsychiatric, respiratory systems, etc. Again, this phase of his knowledge becomes more demanding as we project our manned flights into space.

He should be well acquainted with aeronautical and astronautical pilot activities. If he has taken the time and trouble to become a pilot, his understanding of the problems of the people who depend upon him for selection and maintenance, will be greatly improved. If for no other reason, the stress of performing pilot activities will be greatly appreciated and he will understand why a pilot must have a reserve potential to compensate under stress in a hostile environment. The tests used at ground level to reveal latent difficiencies that may become manifest under stress can be interpreted with more intelligence if the flight surgeon has been exposed by experience. He will appreciate the effects of hypoxia, inclement weather, inadequate cockpit design, difficult vision, color blindness, etc. to a much greater degree if he has had actual pilot experience.

He should understand flight control as directed from the ground level. It is important to acquire knowledge of control tower operations, radar control, ground control approach, in flight discipline while on instruments, etc. His knowledge of astrology should be more than superficial, especially since the advent of astronautics.

His broad scope of medical science is thought to be somewhat exaggerated by our fellow physicians, but it is a proven fact, that the aerospace medical specialist must acquire more than a superficial knowledge of many medical specialities. Experience in the field of aviation medicine has without doubt proven that his knowledge in the various specialities must be acquired on a sound basis of anatomy, physiology, inorganic chemistry, organic chemistry, physics, mathematics, etc.

Ophthalmology and otolaryngology are used practically every day by the flight surgeon in practice as well as research. He should have more than a basic acquaintance with the anatomy, physiology, and pathology of the eye, ear, nose and throat. For example, it is important to understand optics in the jet and space age when the reaction time of the pilot becomes a matter of life or death at tremendous speeds.

Internal medicine is important to the flight surgeon, especially in the cardiology, respiratory, and gastroenterology disciplines. For example, he must have a thorough understanding of the physical and chemical aspects of the partial pressure of oxygen in the alveoli of the

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pilot in a hostile atmosphere. He must understand the effects of lung pathology and cardiac pathology on the alveoli partial pressure of oxygen. He surely should be acquainted with toxicology and hemitology in relation to the above problems.

Psychology, neurology, and psychiatry are probably among the most difficult areas for him to acquire knowledge. This specialized knowledge is used constantly not only in the selection of flying personnel but also for their maintenance. For example, consider the absence of stimuli for the astronaut, or the over abundance of stimuli for the jet pilot on a ground control approach at a busy airfield.

Roentgenology is important to the flight surgeon in the selection, maintenance, and correction of flying personnel. His interpretation of x-ray films is not only important for ground personnel but for the hostile ecology of the airman or passenger. X-ray therapy must also be considered from a different view point. For example, should a basil cell carcinoma be removed from the face of a pilot by surgery and followed with x-ray therapy? Should only surgery be used or should x-ray therapy be used? For the average patient who flys a few hours a year, this is not a difficult decision to make. For the pilot who flys many hours a month at ever increasing altitudes and especially for the astronaut in space, it becomes a more difficult decision. They are supposed to be protected from all types of radiation but it is questionable whether enough time has elapsed to prove this beyond doubt.

Gross, microscopic, and especially forensic pathology are a definite part of the flight surgeons tools. The solution of many fatal airplane accidents has been materially helped by the careful and intelligent preservation of specimens. By the same token a thorough examination of these specimens by gross, chemical, radiological, microscopical, and spectorscopical technique are of utmost importance. For example, the cause of a fatal airplane accident may be missed by the omission of the examination of the head and its contents. I have seen postmortem examinations in which the head was not opened. The same is true for routine serial sections of tissue, as it may be necessary to take many more sections than are usually accomplished.

Laboratory studies are used by all branches of clinical and research medicine. However, to the flight surgeon, interpretation for practical use may differ significantly and it is of immediate importance to make manifest any latent deviation from the normal. For example, the interpretation of the glucose tolerance test should be carefully considered for latent diabetes which later or in periods of stress may become obvious diabetes. The interpretation of the electro-encephalogram for epilepsy, etc. is of more immediate importance for latent pathology which under stress may become manifest. This is equally true for electrocardiograph interpretation.

There are several more medical specialities that require significant knowledge on the part of the aerospace medical physician. We must consider orthopedics, general surgery, chest and cardiac surgery, dermatology, proctocology, gynecology and as more people use air transportation, obstetrics.

A flight surgeon is not only concerned with flying personnel and passengers, for he is aware that it takes many ground personnel to keep an airplane, crew, and passengers aloft. Preventive medicine in the areas of public health and industrial surgery are part of his every day work. In this area, he again intrudes on many disciplines, toxicology, dermatology, immunology, human engineering, nutrition, industrial hygiene, to name only a few.

The aerospace medical specialist must be a competent administrator. Paper work is an indispensable part of his daily life as reports, statistics, etc., have to be finalized with meticulous care. The use of correct language is paramount in recording examination data and to be brief, concise, but accurate, is of basic importance. He must be able to work through volumes of biostatics and determine their significance from the practical point of view.

At this point, our medical colleagues and fellow scientists are about to view us as a "jack-of-all-trades". Does an aerospace medical specialist think he is an expert from astrology to podiatry? Of course not, but in my humble opinion, he must cross many disciplines of science to intelligently accomplish his work. Certainly, he must call for help from other scientific disciplines as he cannot be paramount in all sci-

entific fields. However, his outlook should be approachable and flexible as he is never too old to learn. We could extrapolate this thought to the physicians of tomorrow when many of our present day specialties will be non-existant because of the prevention of mental, cardiac, respiratory, and malignant diseases. Is the areospace medical specialist of today a pioneer for the physician of tomorrow? I do not know, but it is an extremely interesting thought.

It must be apparent to everyone that Aerospace Medicine is a dynamic and ever changing science. Thus, it is necessary for the physician interested in Aerospace Medicine to take advantage of Ohio State University, University of Southern California, Federal Aviation Agency, Airforce Aerospace Medical Center and Naval Aviation Medical Center, post-graduate courses. He should also belong to the societies that exist for the purpose of Aerospace Medicine, which include the Aerospace Medical Association, Airline Medical Directors Association, Space Medical Association, Society of United States Air Force Flight Surgeons, Civil Aviation Medical Association, Aerospace Industrial Life Sciences Association, etc. Most of these medical associations combine their activities into an annual convention. The convention sponsored by the Aerospace Medical Association, actually amounts to an annual post-graduate course. In a word, the physician interested in Aerospace Medicine has ample opportunities to keep his knowledge forever current.

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Enzymes in Mental Retardation

Albert R. Rosanova, M.D., Henry Neimeyer, M.D., Theodore Compall, M.D.,

and Albert Stephan Michaelson, Ph.D., *Chicago, Illinois*

The purpose of this report is to explore the roles that enzymes play in producing—or in preventing—those metabolic disturbances which are associated with mental retardation.

It is now apparent that certain conditions known to be associated with mental retardation result from one or more metabolic disturbances. Phenylketonuria, galactosemia, and amaurotic family idiocy are examples of conditions which are in some way linked with mental retardation. Because these conditions are disturbances of certain essential metabolic processes, it also becomes apparent that they are in some way linked with the absence or the malfunction of one or more specific enzymes.

Because of its length, this report is presented in two parts. Part I follows with appropriate references. Part II will appear in the September issue of IMJ.—The Authors.

General Observations

New breakthroughs achieved by enzymological research provide the knowledge which explains how and why underlying metabolic disturbances develop in mentally retarded individuals.[1-6] It is therefore possible to find an ezymological etiology for mental retardation. On this basis, mental retardation may be said to have two possible causes: (1) It may directly result from the absence or the malfunction of a specific enzyme or enzymes or (2) it may be caused by the accumulation of toxic products resulting from the lack of the enzyme or enzymes that are necessary for some essential metabolic process to take place.

The metabolic disturbances known to be linked with mental retardation—along with the enzymes associated with them—may be classified according to their biochemical functions into four general groups. These include conditions in which there is faulty action of enzymes on: (1) Protein or amino acid substrates, (2) carbohydrate substrates, (3) lipoid substrates, and (4) mixtures made up of two or more different substrates.

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Conditions Caused By Faulty Action of Enzymes on Proteins or Amino Acids

Faulty action of enzymes on proteins and amino acids can lead to conditions such as: Phenylketonuria, the Hartnup Syndrome, organoaciduria (Lowe's Syndrome), maple sugar urine disease, hepato-lenticular degeneration (Wilson's disease), arginino-succinuria, cystathronuria, histidinemia, and citrullinuria.

Phenylketonuria

Phenylketonuria (phenylpyruvic oligophrenia, or "PKU") was the first metabolic condition to be identified with mental deficiency.[9] An inherited disease, PKU is transmitted by a single autosomal recessive gene.

Fate of Phenylalanine: The amino acid phenylalanine is converted into tyrosine, another amino acid, by parahydroxylation. The enzyme which facilitates this process is phenylalanine hydroxylase. Tyrosine is the precursor of important compounds, including diiodotyrosine, triiodothyronine, thyroxine, epinephrine, norepinephrine, and melanin.

Phenylalanine is normally excreted in the urine partly unchanged and partly as phenylpyruvic acid.

Pathogenesis and Diagnosis of PKU: A deficiency of phenylalanine hydroxylase prevents the normal breakdown of phenylalanine. This leads to an excessive accumulation of phenylalanine in the body fluids and tissues. In infants, such accumulation of phenylalanine

seriously interferes with proper mental development. If an obvious mental deficiency is accompanied by urinary excretion of phenylpyruvic acid, a diagnosis of PKU is likely.

A chemical reaction between phenylpyruvic acid and ferric chloride produces a green color. This is diagnostic. Guthrie's bacterial inhibition assay of phenylalanine is also diagnostic.[11]

Treatment: The most commonly used method of treating PKU is based on a low phenylalanine diet. It would appear that this is a rational approach, since it is certainly desirable to reduce the phenylalanine content in a body that already has a surplus of that substance. Yet, it is also important to keep the phenylalanine content from falling to a dangerously low level. This can—and does—lead to critical metabolic consequences.

We suggest a method of therapy which is based on the administration of the enzyme phenylalanine hydroxylase. A lack of this enzyme is, of course, the primary cause of PKU. Phenylalanine hydroxylase has been isolated. Its large-scale manufacture would not, apparently, present any problems.

With this suggested "enzyme therapy," a comparatively low phenylalanine diet could be maintained. At the same time, however, the phenylalanine level could be prevented from falling too drastically, because more phenylalanine could be tolerated in the diet if the enzyme which normally breaks it down were also given. This idea may be compared to that of giving insulin to a diabetic. When sufficient insulin is given, the diabetic is able to tolerate more carbohydrates in his diet.

The buccal, sublingual, and oral absorption routes for enzymes have been proven to be effective.[14] However, phenylalanine hydroxylase —and every other enzyme, for that matter—is a protein. It is therefore conceivable that an anaphylactic reaction might result from the parental administration of phenylalanine hydroxylase to an allergic individual. It should be noted that no such allergic manifestations have been reported when the oral route of administration was used.[15]

The Hartnup Syndrome

The Hartnup Syndrome was first described in 1956 by Baron, Dent, Harris, Hart, and Jepson.[16] Like PKU, the Hartnup Syndrome is an inherited condition. Genetically, it is an autosomal recessive trait. However, no irregularities in the amino acids present in the serum or in the urine of carriers have thus far been detected.

The Clinical Picture: The skin and neurological signs in the Hartnup Syndrome are similar to those found in pellagra.

Skin signs include a rash on exposed surfaces of the body such as the face, neck, legs, and hands. Exposure to sunlight causes the skin to become rough, reddish, and raw. In some cases it may even begin to ooze.

Neurological symptoms are ptosis, nystagmus, poor performance of fine hand movements, tremors of the hands and tongue, irritability, increased deep reflexes, and cerebellar ataxia.

Although mental deficiency is slow in developing, it tends to be progressive. It would seem, however, that mental deficiency does not accompany every case. Henderson,[17] in 1958, reported a case of Hartnup Syndrome in which there was no evidence of slow mental development.

With the exception of proline, there is an increased secretion of most other amino acids into the urine. Also, the secretion of indole products such as indican, tryptophan, indoleacetic acid, and an undifferentiated indolic material is increased. For some unknown reason, the feces contain a large amount of protoporphyrins.

The amino acid level in the serum is normal. For this reason a renal defect has been suspected as the cause of the syndrome. It has also been suspected that an error in the metabolism of tryptophan into nicotinic acid has something to do with causing the disease. However, the exact steps of this suspected faulty process—and the possible missing enzymes—have not as yet been determined.

Organo-Aciduria (Lowe's Syndrome)

In 1952, Lowe, Terry, and MacLachlan[18] described three mentally retarded children, each of whom displayed abnormal excretion of urinary amino acids. In each case, the CO_2 and pH of the blood serum were slightly decreased. However, the NPN, blood glucose, and blood alpha amino acids were within normal limits.

Clinically, there was hydropthalmos with

osteomalacia. Mental retardation began at two-to-six months of age. Abnormal excretion of amino acids into the urine began at this time.

Lowe, et al, suggested that this condition might be precipitated by some inborn error of metabolism involving amino acids, and by an accompanying renal dysfunction. Indeed, many of the syndrome's effects may be caused by renal damage which is secondary to the kidney's reduced ammonia-producing capacity. It is also possible that the enzyme which is needed by the kidneys to produce ammonia is missing.

Maple Syrup Urine Disease

Menkes, Hurst, and Craig[19] originally described this condition in 1954. They named it "maple sugar urine disease" because they detected a striking similarity in the odor of urine excreted by patients suffering from the condition and the sweetish odor of maple syrup. The lactide of alpha-hydroxybutyric acid is thought to be responsible for this characteristic odor of the urine.

Infants afflicted with maple sugar urine disease are apparently normal at birth. Within the first neonatal week, however, they develop symptoms such as irritability, difficult feeding due to labored swallowing, absence of the Moro reflex, irregular and jerky respiration, hypertonicity and opisthotonus, and convulsions. Mental retardation is severe. Death usually ensues by the age of 20 months. It is interesting to note, however, that Morris, et al,[20] have reported an apparently non-fatal variant of maple sugar urine disease.

The Clinical Picture: Excessive amounts of valine, leucine, and isoleucine are found in the blood, urine, and cerebrospinal fluid. This seems to be caused by the lack of an enzyme which catalyzes the decarboxylation stage in the metabolism of the branched chain amino acids—valine, leucine, and isoleucine. For this reason, abnormal quantities of these amino acids, and their respective ketoacids, accumulate in the body fluids. Such abnormal accumulation of amino acids and ketoacids is believed to be in some way responsible for the brain damage which manifests itself in the neonatal period.

Londsdale, Mercer, and Faulkner[22] reported on a four-week-old girl in whom maple sugar urine disease was diagnosed before an irreversible brain damage had set in. This child was treated—apparently with good results—with a diet which excluded the branched chain amino acids.

The above group also reported the first successful demonstartion of the heteroxygous carrier by the use of a leucine "loading" test. This test may prove to be of considerable value in tracing the pedigree of an affected family, and also in genetic counseling.

Gartner[23] reported detecting a deficiency in the key enzyme leucine decarboxylase in patients with maple sugar disease. Hypoglycemia has also been noted in such patients. In cases of hypoglycemia, therefore, the presence or absence of branched chain amino-aciduria should be established before a leucine loading test is performed.

Hepato-Lenticular Degeneration (Wilson's[24] Disease)

Wilson's disease has a gradual, insidious onset which usually begins in adolescence or in early adulthood.

Neurological Findings: There are widespread tremors; muscular rigidity of the face, trunk, and extremities; and various other indications of dysfunction in the extra-pyramidal motor system. In addition, dysarthria, dysphagia, muscle weakness, a mental deterioration characterized by involuntary laughter, some degree of mental retardation, dementia, and even psychosis, are usually found.

The brain lesion consists of a bilateral symmetrical degeneration of the lenticular and the caudate nuclei, along with some degenerative changes in the cortical nerve cells. Denny, Brown, and Porter[26] have reported some improvement in neurological symptoms with the use of B.A.L.—the British anti-Lewisite, dimercaptopropanol. Walsh[27] has reported encouraging results with the use of penicillinamine, which is given orally in a daily dosage of 900 mg. It would appear that a study of the oral or intravenous administration of ceruloplasmin is also worthy of consideration.

Pathology: Depositions of copper are found in various organs. These depositions are responsible for the symptoms and signs of the disease. Copper depositions in the kidneys, for example,

are thought to interfere with enzyme systems which facilitate the transportation of various substances across the renal tubular epithelium. Such interference leads to a generalized aminoaciduria, a glycusuria, and a phosphaturia. These conditions eventually help to produce bony irregularities and sclerosis, ultimately causing a diminution of urinary uric acid which results in a serum hypouricemia.

Associated with all of these various changes —and often preceding them—are two other pathological manifestations. First, there is a progressive multilobar cirrhosis of the liver. Second, a greenish-brown pigmentation—the Kayser-Fleisher ring—may be observed at the periphery of the cornea.

Laboratory Tests: Urinalysis reveals an aminoaciduria, with an increased urinary secretion of copper. The amino acid content of the blood, however, is normal. The copper present in the blood plasma occurs in two forms: (1) A form which is bound to albumen and reacts directly to diethylthiocarbamate; and (2) a second form, which is bound to ceruloplasmin—the factor which facilitates an increase in copper absorption from the gastrointestinal tract, and also an increase of the direct reacting fraction of the copper in the plasma.

Arginino-Succunuria

In 1958, Allan, Cusworth, Dent, and Wilson[28] reported mental retardation in two children whose urine contained large amounts of argininosuccinic acid. Excessive quantities of this compound were also found in the blood and cerebrospinal fluid of these children.

Arginino-succinic acid is the intermediate in the urea cycle. Thus, a defect in the enzymatic synthesis of urea was suspected as one possible cause of the disease.

Cystathionuria

Harris,[29] in 1959, reported mental retardation in an individual who was excreting large amounts of cystathione, an amino acid. This compound is an intermediate in the transformation of methionine into cysteine. It is thought that an enzyme block is present at the point where cystathione is broken down into cysteine and homoserine. Because blood relatives of patients with this disease have a significantly increased cystathione level, a familial, genetic origin of cystathionuria is suggested.

Histidinemia

Histidinemia does not cause mental retardation. It does, however, cause speech defects in four out of five persons afflicted with the condition.[30] Because imidazolepyruvic acid is excreted in the urine, the ferric chloride test is positive. When a ferric chloride test is obtained, therefore, it is important to determine the blood phenylalanine level by means of the latest fluorometric methods or according to the older Guthrie test. These techniques serve to differentiate a true case of phenylketonuria from one of histidinemia.

Histidase, a hepatic enzyme which converts histidine to urocanic acid, is lacking in persons with histidinemia. Plasma and uriniary levels of histidine are markedly elevated.

Citrullinuria

McMurray[31] was the first to describe a case of citrullinuria. This case involved an infant who did well until he reached an age of about nine months. At that time the infant began to vomit and to have epileptic seizures. At 20 months of age his bone structure and motor development were grossly retarded. Hepatomegaly, hypothyroidism, and an abnormal E.E.G. were also observed. The infant continued to vomit.

Citrullinuria is related to the urea-forming process of the body. Normally, citrulline with aspartic acid forms arginino-succinic acid. This, in turn, breaks down to arginine, and this leads to the formation of uric acid. The enzymes concerned with this breakdown have not as yet been isolated. Since citrulline is endogenous in origin, dietary restriction of protein intake is of little therapeutic value.

Relatively New or Rare Conditions

Many other conditions in which enzymes act abnormally on proteins or amino acids—and which are associated with mental deficiency—have been recently described. Among these are: Hypoglycinemia, familial hyperprolinemia, hy-

droxiprolinemia, hyperglycinemia, Oasthouse disease, and others. This rapidly expanding field bids well to become a large area in the sphere of mental retardation.

Part 2 will appear in September issue.

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The Cervical Stump

Joseph A. Stephens, M.D.,* *Urbana*

Subtotal Hysterectomy was a common surgical procedure in most hospitals prior to 1950. As a result of these procedures we are now seeing many patients with retained cervical stumps. Although a good number of these patients only require annual physical examinations and Papanicolaou smears, other patients with cervical stumps demand more definitive treatment. During the past 10 years the gynecologists at Carle Memorial Hospital were aware of a moderate number of cervical stumps requiring surgical treatment. For this reason, the present study was undertaken to determine the conditions necessitating cervicectomy.

The study was conducted in a 150 bed community hospital from July 1953 to July 1963. During this period 49 cervicectomies, 899 vaginal hysterectomies, 504 total abdominal hysterectomies, and eight subtotal hysterectomies were performed.

Many of the problems correspond only to the normal incidence of disease. Pathologic examination of the removed cervices revealed a high incidence of disease. A 10 per cent incidence of carcinoma "in situ" was much higher than one would normally anticipate. Obviously, many of these problems could have been avoided by a total hysterectomy. Most gynecologists are now agreed that any indication for a subtotal hysterectomy is rare. Total hysterectomy has been advocated for more than 30 years.[1] Davis[2] has clearly outlined the advantages of total hysterectomy and pointed out the disadvantages of the subtotal operation.

Many patients who had undergone subtotal hysterectomy prior to 1930 had either died or were now poor surgical risks. During that period, hysterectomy was a less common surgical procedure than today. When one considers that total hysterectomy has been the preferred operation for over 15 years, a comparatively large number of subtotal hysterectomies were performed after 1950. This high incidence is explained by the fact that most of these procedures were performed in surrounding small community hospitals where the surgeons were not familiar enough with the total hysterectomy to warrant the increased surgical risk to the patient.

TABLE 1
Years of Subtotal Hysterectomy Later Requiring Cervicectomy

Years	Number
1912-1930	2
1931-1940	16
1941-1950	22
1951-1961	9
Total	49

The remaining subtotal hysterectomies were performed during the era when this operation was accepted surgical procedure. For several decades conization of the cervix at the time of the incomplete hysterectomy has been advocated.[3] None of these patients had the cervix coned.

TABLE 2
Diagnosis Prior to Subtotal Hysterectomy

Diagnosis	Number
Unknown	30
Fibroids	11
Abnormal bleeding	5
P.I.D.	2
Uterine prolapse	1
Total	49

As reported in other series,[4,5] the primary reason for the subtotal hysterectomy was not known. In many instances, the patient was not aware of the diagnosis or she did not understand the indication. There was a number of patients who did not know they had a cervical stump. These patients should be informed by

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the operating surgeon and he should stress the necessity of yearly examination and Papanicolaou smear. Sometimes the physician did not record the indication for the subtotal hysterctomy on the history.

Uterine fibroids, abnormal uterine bleeding, and pelvic inflammatory disease were indications for subtotal hysterectomy. Prolapse of the uterus hardly seems to be an indication for subtotal hysterectomy unless a suspensory or sling procedure is combined with the hysterectomy.

TABLE 3
Operative Approach

Vaginal cervicectomy	42
Abdominal cervicectomy	7

Gynecologists agree that vaginal removal of the cervical stump is the preferred route in most instances.[6,7] There is decreased morbidity, greater patient comfort, and shorter hospital stay. A combined pelvic repair can also be performed with greater ease when the patients have symptomatic pelvic relaxation.

Thirty-one of the forty-two vaginal procedures were associated with the repair of cystocele and/or rectocele. One can only guess at the number of patients who could have been spared a second operation if a vaginal hysterectomy with repair had been performed initially.

In the smaller community hospitals today, many surgeons are well trained and skillful in performing vaginal surgery. Twenty years ago this was not the case.

Pelvic mass, abdominal and pelvic adhesions, and persistant pain were the indications for selecting the abdominal route. Unanatomic suspension of the cervical stump, and advancement of the bladder often contributed to pelvic and bladder symptoms. Infected cervical stumps often contributed to recurrent bladder infections, dysparunia, leucorrhea, bleeding, and pelvic pain.

Pelvic relaxation was the most frequent reason for cervicectomy and vaginal repair. Many of the cystocele, rectoceles, and/or prolapse of the cervical stumps were probably due to the normal aging process.

Severe chronic cervicitis was the indication for cervicectomy in 12 per cent. The 10 per cent incidence of carcinoma "in situ" is significant.

TABLE 4
Indications for Cervicectomy

Indications	Number
Pelvic relaxation	31
Severe cervicitis	6
Pelvic mass	5
Carcinoma "in situ"	5
Squamous metaplasia	2
Total	49

An additional 4 per cent of the series showed marked squamous metaplasia. The more frequent use of Papanicolaou smear during the past 10 years undoubtedly accounts for this high incidence. Invasive carcinoma was treated by combined irradiation and not included in this series. Biopsy and/or cervical cone confirmed the diagnosis of carcinoma. Ullery reported a 7.9 per cent incidence of carcinoma of the cervical stump in a series of all cervical cancers. An 11.4 per cent incidence of carcinoma in the excised stumps was reported in a series by Planas.

Two cases of hydrosalpinx, two patients with pelvic adhesions attached to the cervical stumps, and a pelvic aneurysm between the uterine artery and vein made up the five kinds of pelvic masses.

TABLE 5
Pathologic Diagnosis

Diagnosis	Number
Chronic cervicitis	30
Normal cervix	10
Carcinoma "in situ"	5
Squamous metaplasia	2
Hyperkeratosis	2

The frequency of cervical infections indicates either the presence of cervical disease at the time of the original surgery or inadequate follow-up. Vaginal bleeding was present in 20 per cent of the stumps with chronic cervicitis.

A number of patients had a false sense of security following a subtotal hysterectomy. Many had not been examined until pelvic symptoms developed. Other patients were unaware that they had a retained cervix. The normal and hyperkeratotic cervices were removed at the time of the plastic repair.

Vaginal removal of the cervix with wide ex-

cision of the vaginal cuff was the procedure in all cases of carcinoma "in situ" and squamous metaplasia of the involved stumps.

Summary

1. During the last 10 years, 49 cervical stumps were removed at a 150 bed community hospital.

2. Most of the subtotal hysterectomies were performed before 1950; however, a significant number has been done since total hysterectomy has been the accepted procedure.

3. In many instances the indication for the incomplete hysterectomy was not known.

4. The vaginal removal of the cervical stump affords many advantages over the abdominal route unless intrapelvic pathology is present.

5. In 60 per cent of the patients, plastic repair was performed at the time of the vaginal cervicectomy.

6. The high incidence of infection in the removed cervices indicates the presence of residual disease at the time of the original procedure or inadequate follow-up.

7. The 10 per cent incidence of carcinoma "in situ" is concrete evidence supporting annual examination and Papanicolaou smear. When indicated, biopsy and conization of the cervix should be done.

8. With the advent of vaginal and total abdominal hysterectomies, one can only guess at the number of patients that might have been spared a second surgical procedure if a complete operation had been done originally in this series. Likewise, conization of the cervix at the time of the initial subtotal hysterectomy would have been prophylactic in a number of patients.

9. Subtotal hysterectomy affords no advantages and has many disadvantages over the total hysterectomy. Only in complicated or unusual cases or in the face of anesthetic problems should a subtotal hysterectomy be performed. Conization or excision of the stump should be considered at a more opportune time.

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Heavy Smoking

Regardless of the adverse effects of excessive inhaling of smoke, the management of patients with chronic pulmonary disease is not necessarily confined to the heavy smoker. If the non-inhaling smoker is not significantly harmed by a habit which brings solace, the physician need not be stampeded into demanding that all smoking be stopped. The practice of medicine should not involve a war against enjoyment. Moderation in drinking was finally accepted by most physicians rather than prohibition of alcohol, even in the face of the terrific cost of health and life to the heavy drinker. Physical Exercise in Breathless Subjects with Pulmonary Emphysema, Including a Discussion of Cigarette Smoking. Alvan L. Barach, M.D. *Diseases of the Chest.* February 1964.

The History of Neurology in Chicago

Roland P. Mackay, M.D., *Chicago*

This is the seventh and final installment of an informative history of neurology not only in Chicago as the title would indicate but throughout the state and the nation. In a delightful and interesting style, Dr. Mackay paints a picture of the growth of neurology as seen against the times in which it was practiced—a story of a city and specialty growing together.

Victor Emmanuel Gonda, born in Ungvar, Hungary, on May 7, 1889, was another unique gift of Europe to neurology in Chicago. His life fell into three distinct phases, of which the first, spent in his native land, included his medical education at the Royal University of Sciences in Budapest, where he graduated in 1911. During his internship and neuropsychiatric residency at the University Clinics, his penchant for keen clinical observation was early evident in his attention to the mental reactions of patients receiving serum therapy for typhoid fever and in his paper, published on that subject in 1915. In that year he entered the military service of Austria-Hungary for the duration of the first world war. In the course of his military duties he became interested in the war neuroses and, in another forecast of his life-long devotion to clinical research, made motion picture analyses of the actions of "shell shocked" patients and published a paper on that topic in 1918. With the end of his military service in 1919, he did further postgraduate work in Berlin and Leipzig to round out his formal neurologic education.

After his marriage and the birth of his son



Victor Emmanuel Gonda
(1889-1959)

Read before the International College of Surgeons, Chicago, Illinois, March 19, 1963. Excerpts of this article appeared in the Journal of the International College of Surgeons, August, 1963 under the same title.

Professor of Neurology, Northwestern University Medical School, and Senior Attending Neurologist, Chicago Wesley Memorial Hospital.

*For much of the material here presented on the general history of Chicago, I am deeply indebted to Emmett Dedmon's *Fabulous Chicago.*[1]

he brought his little family to Chicago in 1924 to open the second phase of his life as a practitioner and teacher of neurology and psychiatry. From 1925-30 he was Clinical Instructor and Associate in Neuropsychiatry at Rush Medical College in the department headed by Peter Bassoe. In 1930 he joined the faculty of the Stritch School of Medicine of Loyola University, where he was first Associate and then full Clinical Professor of Neurology and Psychiatry until 1951. He was also Professor of Neurology at the Cook County Postgraduate School, and Consultant at the Cook County Hospital as well at Attending Neuropsychiatrist at the Merey, Alexian Brothers' and Columbus Hospitals. In 1930 he was elected to membership in the Chicago Neurological Society, and attended its meetings with regularity, addressing it on such topics as astroblastoma of the pineal body, paramyoclonus multiplex, and familial progressive spinal muscular atrophy. In 1938 he was its president, presenting as his presidential address a paper on the war neuroses. Many other scientific societies knew him as a member, including the Illinois Psychiatric Society, the Central Neuropsychiatric Association, the American Psychiatric Association, the American Association for Research in Psychosomatic Problems, the National Society for the Control of Epilepsy and the Association for the Advancement of Psychotherapy.

It was during his work in Chicago that Gonda made his chief contributions to neurology. He was the first to bring to Chicago Cerletti's electrical method of inducing therapeutic convulsive shock, and published a paper on the method in March 1941. In 1941 he also did research at Yale on experimental lesions of the pyramidal tracts in primates, from which work, as well as from his clinical observations, came his description of a new pathological reflex, published in the Journal of Neuropathology and Experimental Neurology in 1942. For the remainder of his life he was an ardent advocate of this reflex, which came to be known by his name.

A coronary occlusion in 1950 terminated his work in Chicago and led to the third phase of his life in Palo Alto, California. With renewed vigor, he became Chief of the Neurological Service at the Veterans' Administration Hospital, where, with his associates, he published papers on a variety of subjects, including epilepsy, cerebellar ataxia, thalamic degeneration after lesions of the frontal lobes, and hepatolenticular degeneration. This last was a posthumous, publication, following his death on May 17, 1959, shortly after his seventieth birthday.

Victor Gonda was a clinician with an open mind to new methods of diagnosis and treatment and a devotion to clinical research. To watch him examine a patient was to gain an insight into his meticulous, compulsive perfectionism, which often exceeded the bounds of the practical. In eliciting the abdominal reflexes he used the brisk but dainty stroke of an orchestral director asking the violins for pizzicato. Posed a difficult question, he tossed his head back, gazed upward, and with a "Hmm-m" of thoughtfulness, launched a gentle rejoinder. A man of great good humor, he had but little sense of humor, and yet when asked by Loyola University to set down his military honors in his *curriculum vitae*, he wrote in his precise, feminine script, "Since I fought on the wrong side, a list of my decorations would be irrelevant." He pursued his serious way with rigid singleness of purpose, eager for recognition and deeply appreciative of the honors that came his way. Although his scientific contributions wer significant, his warm personality and his gentle humility were a greater memorial of his character.

Stephen Walter Ranson, although not a clinician, was a part of the neurology of Chicago and exerted an important influence upon the young neurologists throughout this continent and the world. Born August 28, 1880 at Dodge Center, Minnesota, he graduated at the University of Chicago as a Bachelor of Science in 1902 and as a Doctor of Philosophy in 1905, taking his Doctorate in Medicine at Rush Medical College in 1907. During the next year he interned at the Cook County Hospital, but never practiced medicine. After 21 years as Professor of Anatomy at Northwestern University from 1912-24, he was Professor of Neuroanatomy at Washington University in St. Louis from 1924-8, after which he was Professor of Neurology at Northwestern until his death, August 30, 1942.

Thus, he was an academic neuroanatomist and taught a host of young medical students



Stephen Walter Ranson
(1880-1942)

and headed a laboratory in which many neuroanatomists were trained. His renowned textbook, which was his chief gift to the neurological world, entitled *The Anatomy of the Nervous System from the Standpoint of Development and Function*, appeared in its first edition in 1920 when he was at Washington University. The formulat was magnificent and its style and illustrations so superb that it became at once the standard textbook of neuroanatomy throughout the country, and, as a reference book, the Webster's dictionary of its field. Its popularity was great and it went through printing after printing and edition after edition until his death—and after. In addition, over a long life he contributed scores of papers on the details of the fiber tracts of the brain and spinal cord, of the nuclear masses, and of the structure of the spinal ganglia and sympathetic nervous system.

In the latter half of his professional career he turned his attention more and more to the physiological correlates of anatomy, and so guided young graduates into neurophysiology. About 1932 he returned from England with Horsley's stereotaxic instrument and immediately began work on the reticular formation in collaboration with Ingram, Pitts and especially Magoun, the most illustrious of his pupils. These scientists, following Ranson's lead, and now scattered over the country, have written a great and essential chapter in the neurology of behavior which reflects much credit upon their first teacher. Ranson was a member of numerous scientific societies, including the Chicago Neurological Society, the American Neurological Association, the American Association of Anatomists, the American Physiological Society, the Association for Research in Nervous and Mental Diseases. He frequently addressed the Chicago Neurological Society.

In person, a large, pale, severe, quiet, even timid man, he was, to the outside world, the embodiment of the academic recluse, but to his laboratory fellows, and perhaps to his students, a rigid, autocratic master, full of picayune insistence on the trival, without warmth or feeling. Like every man, however, he appeared in different lights to different observers. A fellow-scientists said of him: 'H'e was a sour and self-centered man, a pedestrian anatomist, without imagination." But the President of Northwestern University, Roscoe Miller said, at his death, "He was always modest, unassuming, friendly—with an abhorrence of sham." That he had considerable interest in his fellow man is revealed by his taking an extensive motion picture film of the great man and near-great at the International Neurological Congress in Berne in 1931, and projecting it, with many personal comments, at the meeting of the Chicago Neurological Society on October 22 of that year. For us today, he is remembered as an earnest scientist, painfully meticulous, as befits an anatomist of the nervous system, and an indefatigable seeker and revealer of the facts!

Charles Judson Herrick may justly be called the greatest neurologic philosopher—in the original and truest sense of the word—that Chicago has known. Born in Minneapolis on October 6, 1868, the son of a Baptist minister, he rejected his early training for the ministry to find a deeper solace for his religious spirit in "pit(ting) one's intelligence against ineluctable nature, in the hope of extracting some meaning from it all." In 1889 he followed in the footsteps



Charles Judson Herrick
(1868-1960)

of his beloved brother Clarence to teach biology at the University of Cincinnati. The two of them founded the Journal of Comparative Neurology and Charles carried it on to preeminence after the death of Clarence in 1904, until it was acquired by the Wistar Institute in 1908. After receiving his Ph.D. at Columbia University in 1900, he entered the Chicago scene in 1907 when he came to the University of Chicago as Professor of Neurology, a position that he occupied until his retirement in 1937. During these 30 vivid years he became and remained the dean of academic neurology in this country, through his monumental basic studies in the comparative anatomy of the nervous system and the more than 200 articles in which he set forth his findings. His choice of the rapidly evolving amphibian nervous system for his special attention was crucial for his study of neurologic evolution. But his was no sterile anatomical description but an imaginative analysis of the dynamic alterations of structure in adaptation to changing environmental conditions. His most famous and influential book was his *Introduction to Neurology*,[21] a work so simple as to be profound in its comprehensive of neurologic function.

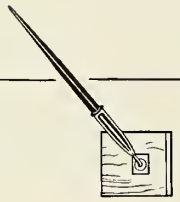
His philosophy, woven thus out of the strands of laboriously won facts, was not an armchair construction. He was a humanist *par excellence*, and he sought always for the meaning behind his facts. He believed that "scientific facts are not worth what they cost . . . unless they can be so interpreted as to lead to value judgments, as guides to more satisfying, purposeful action." His was a quiet, untroubled, scholarly life, far removed from the harried existence of the clinician, who can only envy him his opportunity for reflection on the significance of his observations. He has summarized his anatomical work in *The Brain of the Tiger Salamander*[22] and his philosophy in *The Evolution of Human Nature*.[23] These writings were carried out after his retirement in 1937 to live in Grand Rapids, Michigan. He died, his quest for ultimate truth unsatisfied, January 29, 1960.

As we have seen, neurology began in the middle west about 1850 as a very practical concern for the disorders of human behavior. The two men whose sketches have just ben given are of special interest as non-clinical neurologists whose work leads at last to the physiology of behavior as a pure science. These men interested themselves first in neuroanatomy, and finally in the details of neurologic function. One of them, Stephen W. Ranson, earned his fame as an anatomist but finally opened the door to supremely important discoveries in the neurology of behavior. The other, C. Judson Herrick, began, too, as an anatomist, but with a deep philosophic interest in life, and ended as the greatest neurologic philosopher that this country has produced. Thus, the full cycle is complete, from behavior to behavior, and we return to our point of departure.

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Address manuscripts to T. R. Van Dellen, M.D., Editor, Illinois Medical Journal, 360 N. Michigan Ave., Chicago 1, Illinois.

Better Sex Education

Many American youngsters are being permanently scarred through misuse of sex because American society knows almost nothing about sexual powers, a lack of respect that allows us to treat sex most casually. This charge was made recently by Dr. Mary Calderone, medical director of Planned Parenthood-World Population at a meeting of the national family planning organization in Dallas.

Addressing a medical-scientific conference of the American Association of Planned Parenthood Physicians, Dr. Calderone said that a casual attitude about what is fundamentally a most profound experience, central to the life of man and woman, has cheapened the value of this experience.

"We have come to a moment when to say 'sex is good' is simply not enough," she declared. "How much we think about man's sexual life and how little we know about it, and how even more afraid we are to find out."

Dr. Calderone said that changing moral codes call for new efforts to understand and assimilate them. But she saw a stronger need for establishment of adequate codes of behavior because our present patterns have been arrived at "more by happenstance and inaction than by positive action."

Proposes New National Organization

In her last address before a Planned Parenthood audience, Dr. Calderone announced that she is leaving the Federation on July 1 to form, with five colleagues, a new national organization in the field of sex information and education. It was too early, she said, to make a public statement as to the concrete shape the new organization will take.

"We can say," Dr. Calderone added, "that we are motivated by a conviction that the first step is to establish man's sexuality as a health entity." She said it was important to identify the special characteristics that distinguish man's sexuality from its relationship with human reproduction.

"It is necessary to dignify the problem of sexuality by an openness of approach, study and scientific research designed to lead towards its understanding and its freedom from exploitation," Planned Parenthood's medical director said.

"Professionals and society itself need leadership towards the end that human beings might be aided toward responsible use of their sexual facilities and towards assimilation of sex into their individual life patterns as a creative and re-creative force," she asserted.

Responsibility of Child Spacing and Family Limitation

Dr. Calderone has been medical director of Planned Parenthood for nearly 11 years. In that time, she said, "it was borne in on me over and over again that responsible parenthood in terms of child spacing and family limitation really meant responsibility in one's sexual life. It was a short step then to the concept of responsibility to one's sexual life."

In her experience, Dr. Calderone said she found people doing good jobs in certain limited areas of sex education, in premarital education and in the field of marriage counseling. But, she continued, "it was very plain to see that our young people are growing up by and large without any orientation at all about how to face and handle and assimilate creatively and constructively their own sexual urges and powers."

American attitudes about man's sexual behavior as a part of his "whole self" are just about where our attitudes were about planned parenthood 10 years ago, she declared.

(Continued on page 70)

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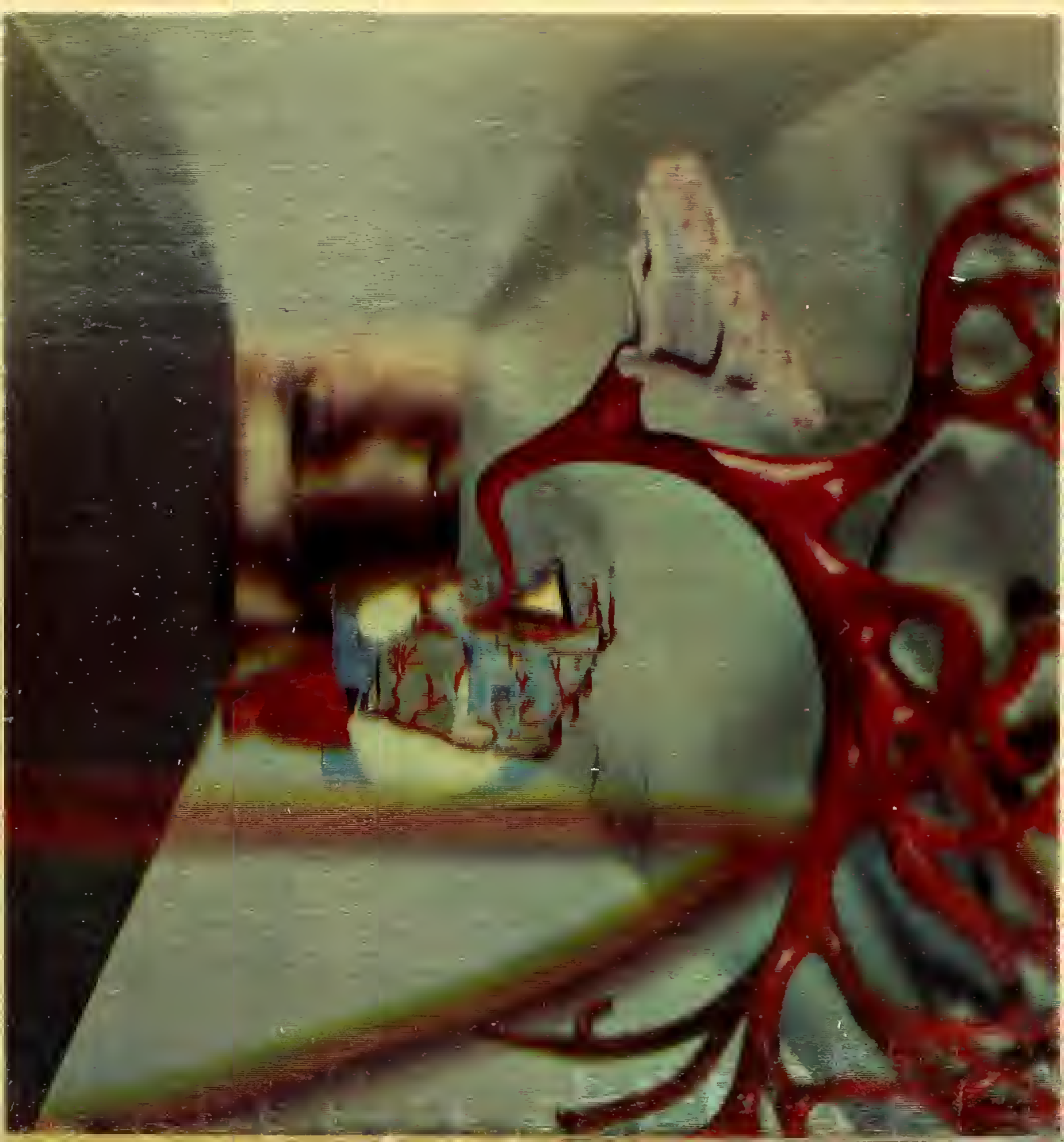
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1. Gelfand, M. L., and Goodkin, L.: Painless Myocardial Infarction, Scientific Exhibit, A.M.A. Ann. Meet., Atlantic City, N. J., June 16-20, 1963.

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(Continued from page 65)

"We are all very well informed about the processes of human reproduction," she continued, "and we have been led down the garden path by the ease with which we could give this kind of information to our young people and fool ourselves into thinking that this was sex education. True, the same organ systems are involved, but how different the functions and the processes."

She told her audience of physicians that persons with sexual problems turned to them first, and yet the average physician was poorly prepared to deal with such difficulties.

A shift in population patterns, with increasing proportions of those under 20 and over 50, has intensified problems relating to the "waxing and waning" of sexual powers, according to Dr. Calderone.

Changing Sexual Morality

She described changes in sexual morality as a "sliding scale that has crept up on us, unaware." It began early in this century when it was "immoral" for a woman to apply her lipstick in public. In the nineteen twenties, Dr. Calderone recalled that "the thick, heavy silk stockings we wore in those days were considered 'immoral' by a well-known girls' school because the leg hairs came through them. The girls were forced to wear two pairs of heavy cotton stockings when they went on their daily walks."

In the thirties and forties, she continued, young people gained control of family cars and then family apartments or houses. At the present moment, the argument is whether or not girls should be allowed in boys' rooms on the campuses after seven p.m.

"I have never really discovered what could happen before seven p.m. that could not equally well happen after that magic hour," she said.

Dr. Calderone was confident that hard-won acceptance of the movement for birth control would carry over and facilitate developments in the field of sex education.

Spastic Dysphonia

Medical literature contains little on the problem of spastic dysphonia, a disorder of the voice. Frequent, uncontrolllable and unpredictable hoarseness are the symptoms of spastic dysphonia. Episodes may be momentary or last for minutes. The mechanics of the spasms are not fully understood, but investigators do agree that the condition is not organic. From studies made it is believed to be due to emotional trauma. When edema of the vocal cords is present it is believed to be the result rather than the cause of spastic dysphonia. Therapy varies from patient to patient. Some treatments found to be helpful are voice re/raining, which in itself does not produce satisfactory results; psychiatric counseling, tranquilizers (which are not too successful), and improving faulty breathing habits.

These methods are used in combination since individual response in each case differs. Further Study of Spastic Dysphonia. Bernard A. Landes, Ph.D., *California Medicine*. August 1962.

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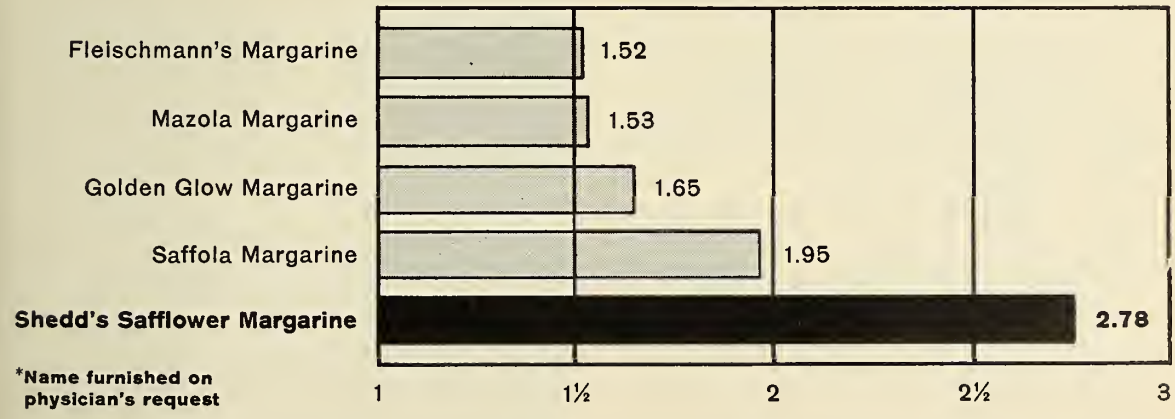


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EDITORIALS

Medicine in India

While on a recent hunting trip to India, I had a very interesting interview on March 4, 1964 with the Federal Health Administrator, Dr. Eugene Campbell. Dr. Campbell is a John Hopkins graduate and has been in India for ten years. The Public Health Service has a chief health officer in each state and the local health services are co-ordinated with the Federal Health Service administered by Dr. Campbell and his New Delhi office and personnel.

February through April is the dry season. The weather is warm and nights are cool. One is immediately struck by the over-population, under-education and poverty of the country. India, half the area of the United States, has a population of 450,000,000 people. Only thirty per cent of the children are able to go to school. Of the 30% only one-fifth (20%) of them have an opportunity for high school education. Professional education is primarily obtained in foreign countries. India does not produce near enough food to be self-sufficient. They import 10,000 tons of food stuff daily from the United States alone.

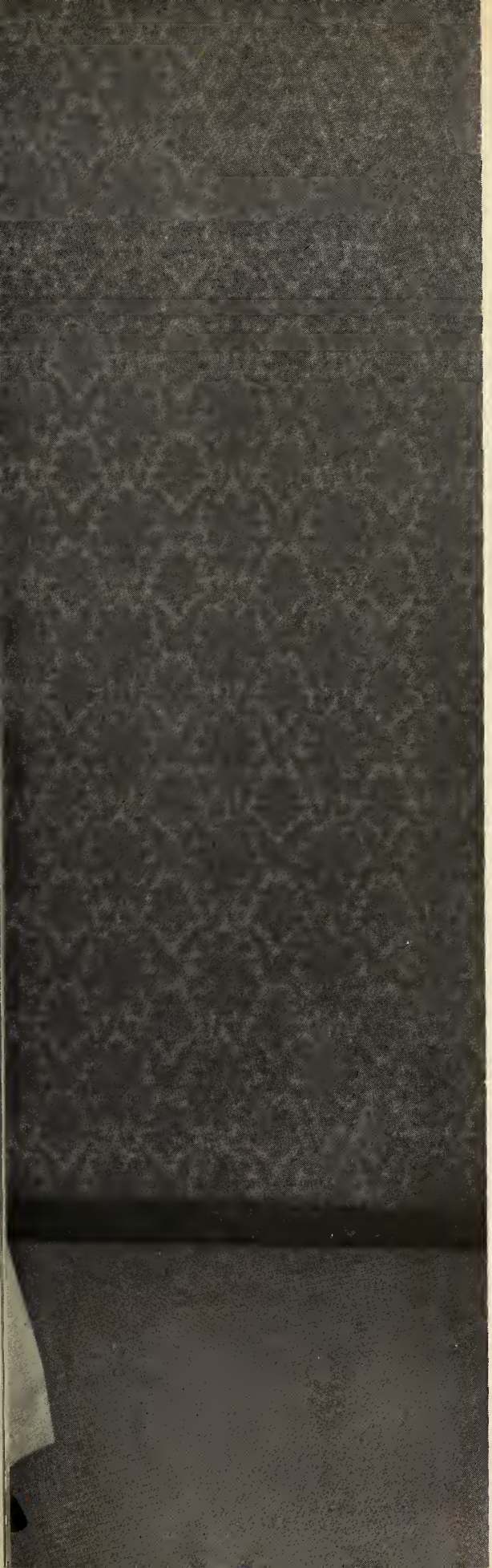
It is interesting that Indian life expectancy is only 32.5 years for males and 31.7 years for the females, as compared with approximately 65 years for males and 70 years for females in the United States. Forty-seven per cent of males and forty-eight per cent of females die before the age of 20 years. Malignancy is not a serious health problem. People now just do not live long enough.

Malnutrition and unhygienic conditions are closely related to India's health problem. The most common causes of ill health are respiratory infections, the acute exathemata and endemic small pox. Malaria has been a serious health problem, but since 1962 this scourge is being wiped out. Since 1958 the 30 million malarial attacks per year were reduced to 100,000 in 1962. The cost has been over 200 million dollars for five years, broken down to a cost of ten cents per capita per year. Most of the money and personnel has been supplied by the United States and World Health Organization.

Tuberculosis is another serious health problem in India today. Cows are not tuberculin tested. Tubercule bacilli in milk remains one important source of infection in children. As long as the cow remains sacred and roams at will, control of tuberculosis will be slow. While in New Delhi I was a house guest of the Hugo Remke's of Evanston. He is connected with the United States Re-development Agency operating through our Embassy. They live in the Embassy district of the city. One morning after arising early I saw where the cows overturned the garbage containers for fodder. A little later neighborhood children again went through the garbage refuge for food. Inadequate attempts are being made in treating and controlling the disease. The lack of organization and trained personnel with no follow-up leaves much to be desired in this particular field. Gastrointestinal upsets due to poor diet and sanitation are common. Dysentery, cholera, typhoid fever, ameba and typhus head the list and are found endemic in some specific areas. Venereal diseases are not uncommon. Insufficient treatment and follow-up are the rule.

The shortage of doctors and nurses remains acute. A few medical and nursing schools are being established. Two nursing schools have been started in Hyderabad and Jaipur. India has only 35,000 nurses for a population of 450 million. One realizes the magnitude of the problem when in the United States with one half the population we have over 550,000 nurses. The medical schools have been staffed by key U.S. faculty members (on a 2 to 4 year basis) and short term visiting professors for teaching, workshops, seminars, demonstrations and lectures. The whole scheme of the medical educational program is directed towards enlarging

(Continued on page 76)



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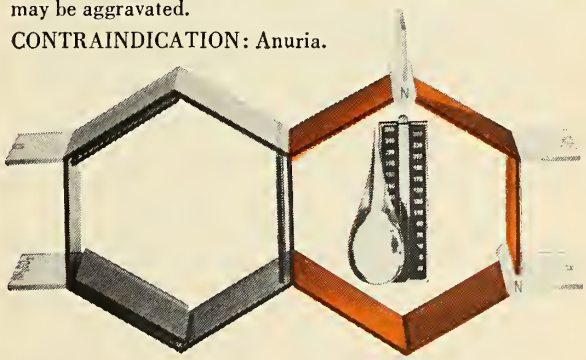
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2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

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(Continued from page 72)

the medical educational opportunities and basic health facilities in India.

Our discussion touched upon the lack of village physicians. Dr. Campbell summed it up by saying: "When you do not have near enough doctors for the large centers, how can you expect to supply any physicians for the villages," (who primarily exist on witch-doctor care).

India is trying desperately since their independence in 1947 to catch up. The main deficiencies are malnutrition from low production of food stuffs, poverty, and overpopulation. More and more talk is heard privately and from government sources regarding family planning and vasectomies. In some states a pay scale for this operation has been advocated.

Dr. Campbell has done a heroic job in controlling malaria. In time, with better equipment and personnel and more Rupees much more can be accomplished.

Leander W. Riba, M.D.

Student Physical Examinations

From now until September, physicians all over the country will be presented with exam blanks for physical examinations, required by Colleges, from students about to enter upon a college career. These physical examinations forms are as important to the College Health Service as are the transcript of his High School grades. In many instances Colleges will deny him or her entry if this requirement is not met.

The reports from the family physician are confidential communications and omittance of a history of allergies, diabetes, tuberculosis contacts or epilepsy make it difficult for the Health Service Physician to give adequate, rapid treatment or assist in the diagnosis when an emergency arises. Such omissions are an *injustice* to the student.

College Health Services are designed to keep at a minimum any rampant condition which can occur where there are large concentrations of people. They do not intend to compete with private enterprise. They will co-operate with the family physician in carrying out his prescribed treatment, check results—and, if asked—communicate with him in regard to progress or regression. Past laboratory work or results may be obtained in most cases. Our laboratories do not presume to do work for the family physician, but only those procedures required to help the College Health physician in evaluating the condition of the student.

Among the most flagrant omissions are those which fail to state that the student has psychiatric tendencies, epilepsy or diabetes. If these conditions are under adequate care and treatment there is no reason why they would be rejected from any institution of higher learning.

The history of a rheumatic heart disease, cardiac surgery, frequent concussions or orthopedic conditions are a great aid in placing a student in the right category as far as his physical education or athletics is concerned. The physician's recommendations are taken into consideration and many students, not liking physical education, try to prevail on the physician to suggest restricted activity.

Some students do have a tendency to use health services too frequently, to a point of hypochondracy, and particularly "gold bricking" or when they are doing poorly in class work. Some of this may be due to the relatively low cost of care to the student and also to the method of indoctrination by parents and physicians at home as to the use of medical services.

In conclusion, just because the physician has known Mary or John for their lifetime, and can't believe they are old enough to embark on a college career, he will do the boy or girl and the Student Health physician a great service in giving them a good, complete, thorough physical examination and proudly signing his name and address to the form, as a stamp of approval.

Irving W. Salowitz, M.D.



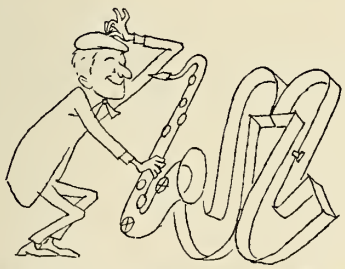
Vertigo couldn't defrost cool Katt.



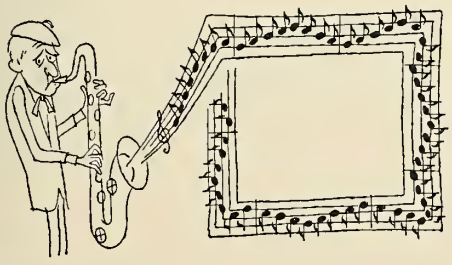
His dizzy notes got the critics' votes.



His doctor (a hep M. D.) prescribed...



Antivert, which stopped vertigo the most.



But...

MODERATE TO COMPLETE RELIEF OF SYMPTOMS IN 9 OUT OF 10 PATIENTS*

Antivert combines meclizine HCl, an outstanding drug for treatment of vestibular dysfunction, with nicotinic acid, a drug of choice for prompt vasodilation. Prescribe Antivert for your patients with vertigo, Meniere's syndrome and allied disorders.

Precautions and side reactions: Frequent, short-lived reactions include: cutaneous flushing, sensations of warmth, tingling and itching, burning of skin, increased gastrointestinal motility, and sebaceous gland activity. In explaining these reactions to the patient, it is suggested that they be regarded as a desirable physiological sign that the nicotinic acid is carrying out its intended function of vasodilation. Because of this vasodilation, severe hypotension and hemorrhage are obvious contraindications to Antivert therapy.

Dosage: One tablet or one to two teaspoonfuls (5-10 cc.) t.i.d. just before meals. Specific requirements for individual patients should be determined by the physician.

Supplied: Tablets in bottles of 100 and 500. Syrup in pint bottles. Rx only.

*Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

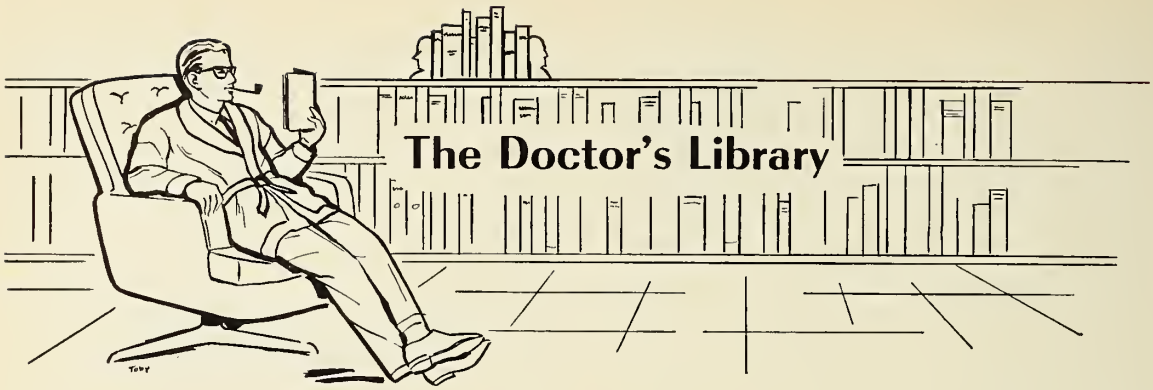
Antivert® ROERIG
(meclizine HCl, nicotinic acid)

stops vertigo

TABLETS: (meclizine HCl 12.5 mg. and nicotinic acid 50 mg.)

SYRUP: (each 5 cc. teaspoonful contains meclizine HCl 6.25 mg. and nicotinic acid 25 mg.)

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The Doctor Has a Heart Attack. Samuel B. Goodstone, M.D. Price, $3.50; 118 pages.

Dr. Goodstone has, in a simple and delightful manner, described his personal experiences at the time of his heart attack, and during his convalescence. He has, in a very painstaking fashion, described the events in a language that the layman can easily understand. Furthermore, he has adequately discussed and described the purpose of the electrocardiogram, the types of blood tests performed, the gradual return to activity, the diet, and many other questions commonly asked of the physician by patients who have sustained heart attacks. I highly recommend that patients be allowed to read this book to obtain a clear, concise and adequate means whereby all their questions may be answered. In fact, the physician will enjoy reading this delightful account of Dr. Goodstone's experiences.

Maurice Gore, M.D.

Evolution of the Arteriosclerotic Plague. Edited by Richard J. Jones. Price $6.75; 360 pages. The University of Chicago Press, 1963.

This highly technical publication is a collection of papers presented at a symposium held in March, 1963. The participants were international authorities who discussed one of the foremost topics of the day, namely, the relationship between the serum lipids and the development of the arteriosclerotic lesion. It takes the reader from the earliest conception of the development of the arteriosclerotic plague through the various stages until the lesion is studied at the post-mortem table. Current theories are discussed and notably, studies with the electron microscope presented.

This book is recommended to the highly trained physician, who is primarily interested in this phase of cardiovascular investigation.

Maurice Gore, M.D.

Principles of Neurological Surgery. Loyal Davis and Richard A. Davis. 608 pages, 234 illustrations. W. B. Saunders Company, Philadelphia, 1963.

Illinois physicians may be interested in this volume by the distinguished former chairman of the Department of Surgery of the Northwestern University Medical School and his son. It is a model of succinct style, flawless diagrams and meticulous printing. In this regard, it is similar to the senior author's previous book on this subject, *The Principles of Neurological Surgery*, published by Lea & Febiger.

Each chapter is introduced by a portrait of and quotation from one of the giants of neuro-diagnosis or neurosurgery. To see the kindness in the faces of Egas Moniz and W. J. Mixter and the austere aloofness of Harvey Cushing greatly personalizes the presentation. Neurosurgery lends itself well to an organized presentation; therefore, such sections as those on intracranial vascular disease, intracranial tumors and central nervous system infections can stand alone or together, as they did in the previous volume. The reference lists which conclude each section appear to be comprehensive.

Of partieular interest is the exhaustive approach to peripheral nerve injuries. The senior author is a recognized authority on this subject and this chapter carries his stamp. It details diagnosis, treatment, signs of returning function and the all-important rehabilitation of the patient. The section of causalgia quotes at length from Mitchell's wonderful 1864 description of this entity.

Though this book will have less appeal for today's well informed physician than its predecessor, it is an excellent reference volume for students and for those surgeons who engage in a broad practice.

John J. Bergan, M.D.



How NALLINE® helps to keep the lid on drug addiction in California

NALORPHINE HCl
INJECTION U.S.P.

The use of the narcotic antagonist NALLINE® (nalorphine HCl injection U.S.P.), as a test of addiction, has significantly curtailed illicit narcotic traffic in Alameda County, California. **In penal terms alone, three years after the institution of the test using NALLINE, prison admissions for addiction has dropped from 13.7% of total admissions to 4.4%.**[1]

The test was given to persons suspected of addiction and to addicts as a condition of probation or parole.

NALLINE does not cure addiction. It can, however, help addicts psychologically, because they know NALLINE detects relapse and that relapse leads to a return to prison or hospital. Definitive answers to the epidemiology of addiction—in itself a symptom of an underlying disease that may be psychologic, physiologic, or pharmacologic in nature—are, as yet, unknown.[2,3]

The test should be undertaken only by physicians experienced in dealing with narcotic addicts.

INDICATIONS: To reverse significant respiratory depression due to opiates. Diagnostic—to test for opiate narcotic addiction.

CONTRAINDICATIONS: Do not use in mild or non-opiate respiratory depression.

PRECAUTIONS: Due to risk of violent withdrawal symptoms, use with **extreme caution** and in small doses in narcotic addicts and in patients receiving opiate narcotics. Effect gradually lost on successive doses; respiratory depression may result.

SIDE EFFECTS: Untoward reactions include dysphoria, miosis, pseudoptosis, lethargy, drowsiness, sweating, pallor, nausea, psychotomimetic manifestations.

Before prescribing or administering, read product circular with package or available on request.

Note: NALLINE will not precipitate abstinence symptoms in meperidine addicts unless they are taking 1,600 mg. or more daily. The ability of NALLINE to detect addiction to codeine is unknown.

References: 1. Brown, T. T.: The Enigma of Drug Addiction, Springfield, Ill., Charles C Thomas, 1961, pp. 287-334. 2. Chesnick, R. D.: Med. Times 90:247 (March) 1962. 3. Narcotic Addiction Symposium: New York Med. 18:562 (Aug. 20) 1962.

SUPPLIED: Ampuls of 1 and 2 cc. and vials of 10 cc., each cc. containing 5 mg. of nalorphine hydrochloride. **Note:** The Federal Bureau of Narcotics now classifies NALLINE as a Class M narcotic preparation. Thus, the purchase of this preparation no longer requires a Federal Narcotic Order Form.

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NALLINE® HCl
NALORPHINE HCl INJECTION U.S.P.

MSD **MERCK SHARP & DOHME** | where today's theory is tomorrow's therapy
Division of Merck & Co., INC., West Point, Pa.



Rx Review

Tremin: A potent compound for the prevention and control of drug-induced parkinsonism as well as the symptoms of Parkinson's disease.

Manufacturer: Schering Laboratories Division of Schering Corporation.

Description: The drug is known generically as trihexyphenidyl hydrochloride. Clinically, its action is three-fold: (1) It promptly relaxes rigidity in persons with Parkinson's disease, (2) it relieves the depression and mental inertia characteristic of all forms of parkinsonism, and (3) it minimizes and sometimes obliterates tremor.

The clinical picture of drug-induced parkinsonism, a neurological reaction to tranquilizers (reserpine and phenothiazines), shows varying degrees of intensity and combinations of loss of associated movements, rigidity of limbs, tremors, facial rigidity, difficulty of movement, gait and posture disturbances, drooling and skin changes.

Indications: Tremin may be used at the earliest sign of drug-induced parkinsonism to prevent its progression and permit continued treatment with tranquilizer or to control the reactions should they become more severe.

Side Effects: Some patients may exhibit minor side effects, such as dryness of mouth, blurring of vision, dizziness, mild nausea or nervousness. With continued use of the drug, however, these side effects tend to decrease.

Availability: Tremin is available in 2 mg. and 5 mg. scored tablets and may be obtained upon prescription only. It is manufactured by Schering in bottle of 100 and 1000.

Ilosone®: A chewable tablet form of the antibiotic Ilosone® (erythromycin estolate, Lilly) is designed for children who rebel against liquid medication, yet are unable to swallow capsules.

Manufacturer: Eli Lilly and Company, Indianapolis 6, Indiana.

Description: Ilosone is the most active form of trythromycin. Blood levels provided by Ilosone are early, high, and long-lasting—two to four times those of other erythromycin preparations—even when taken with meals.

Indications: Ilosone is indicated in infections caused by micro-organisms that are sensitive to its action (especially in staphylococcus, hemolytic streptococcus, and pneumococcus infections). The diseases caused by these bacteria constitute a high percentage of the most common bacterial infections encountered in clinical practice.

Side Effects: The incidence of side-effects with use of Ilosone is low. In a small proprotion of patients local stimulating action of Ilosone on the alimentary tract has caused gastro-intestinal disturbances.

Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. The incidence of *reported* cases has been three per million treatment courses. There have been no fatal or definite residual effects.

In the presence of suspected sensitivity to Ilosone, or in cases of decreased liver function, the drug should be used with caution. It is contraindicated in patients known to have had any form of liver dysfunction ascribable to the antibiotic.

Dosage: The usual dosage for children 25 to 50 pounds is 1 tablet every six hours; for adults and children over 50 pounds, it is 2 tablets every six hours.

In more severe or deep-seated infections, these dosages may be doubled.

Availability: Ilosone, Chewable Tablets, U.S.P., 125 mg. (base equivalent), are supplied in bottles of 50 (No. 1834).

Norinyl® The physiologic pathway to fertility timing. Virtually 100 per cent protection against unplanned pregnancy.

Manufacturer: Syntex Laboratories, Inc.

Description: Each tablet contains: norethindrone 2 mg. and mestranol 0.1 mg.

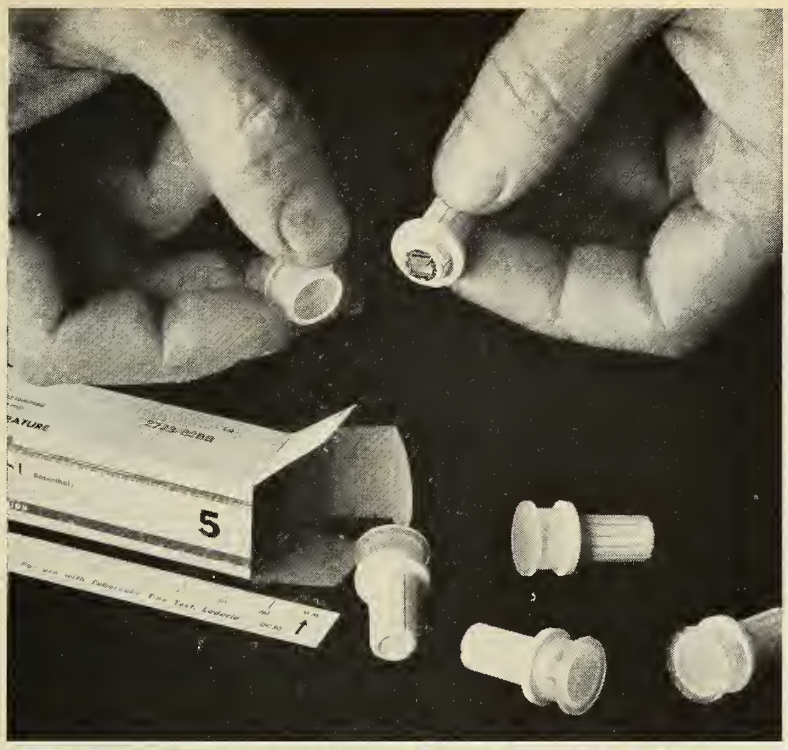
Contraindications: Thrombophlebitis or pulmonary embolism (current or past); cardiac, renal or hepatic dysfunction; carcinoma of the breast or genital tract; severe depression.

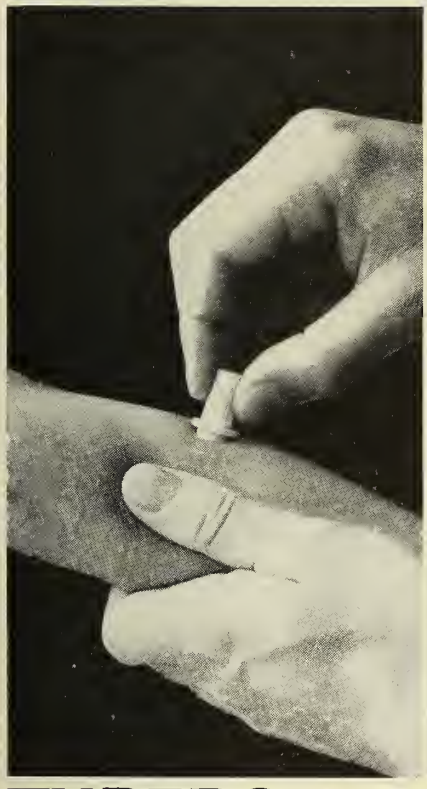
Precautions: Existing uterine fibroids may increase in size. In lactating mothers delay Norinyl until nursing needs are established. Withhold Norinyl before liver or endocrine function testing. In metabolic or endocrine disorders careful clinical preevaluation of patients is indicated. Because progestational agents with estrogen in general may cause some degree of fluid retention, patients with a history of epilepsy, migrane and asthma require careful observation.

Side Effects: According to observations thus far, side effects consist mainly of changes in the menstrual cycle, symptoms resembling early pregnancy, weight gain, nausea, and a few minor, generally transient, subjective complaints (headache, dizziness, nervousness and irritability).

Dosage: One Norinyl Tablet orally for 20 days, com mencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 of the cycle is the first day of menstrual bleeding.)

Availability: Two mg. tablets come in dispensers of 20 tablets or in bottles of 1000 tablets.







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ILLINOIS MEDICAL ASSISTANTS ASSOCIATION REPORT

IMAA 2nd Annual Symposium

The Illinois Medical Assistants Association will hold their second Annual Symposium on September 19, 1964, at the Veteran's Facility and the Holiday Inn in Danville Illinois. Following is the program as presented to date:

8:00 to 9:00 a.m. Registration. Veteran's Facility Administration Hospital 1900 E. Main St., Danville Illinois. (Coffee and Rolls will be served).

9:15 a.m. Welcome by the President of Vermilion County Medical Assistants Association.

9:20 a.m. to 11:30 a.m. Tour of the Veteran's Administration Hospital.

11:30 to 12:00 Drive back to Holiday Inn (Transportation will be furnished for those who do not have cars).

12:00 to 1:15 p.m. Luncheon at Holiday Inn. Dr. W. F. Lantz, Pres., Vermilion County Med. Society. Invocation by Rev. Fred Eberline, Chicago Ill. Lunch. Dr. J. H. Harding, Advisory Committee Chairman, Vermilion County Medical Assistants Assn.

1:30 to 2:00 p.m. Rev. Fred Eberline will speak on the relationship of the minister and the doctor.

2:00 to 2:30 p.m. Mr. Don Baldwin, Attorney, "The Medical Assistant and the Law."

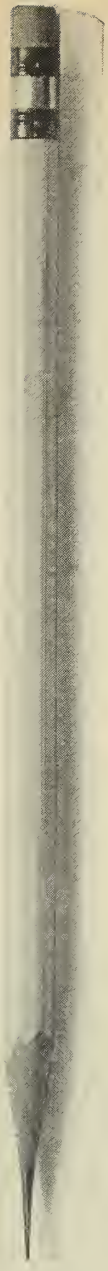
2:30 to 3:00 p.m. Dr. V. J. Soukup, Acting Chief, Medical Service, Veteran's Facility, "Psychiatry in Medical Practice Today."

3:00 to 3:30 p.m. Harold W. Keschner, M.D., Pathologist. Laboratory Medicine to be illustrated by Lantern Slides.

3:30 to 4:00 p.m. Mrs. Alice Hendrickson, R.N., Vermilion County Dept. of Public Aid, will speak on the Kerr-Mills Law.

4:00 p.m. Adjournment.

We feel this is a very well-rounded educational program and should be of benefit to any medical assistant who can attend.



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TOBACCO	ALCOHOL	Rx DRUGS
☐ $19	☐ $36	☐ $141
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Score yourself 100% if you checked the bottom figure in each column. Yes, the U.S. Department of Commerce reports that 1962 per capita expenditure was $42 for tobacco, $57 for alcohol, only $13 for prescription drugs. That's about 25 cents per week per person for drugs that helped them stay well, get well, or possibly helped save their lives. Can you think of a bigger bargain?

Your patients might like to take this test, too. May we send you 25 copies for your waiting room?

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NEWS NOTES

New Mental Retardation School Open

Warren G. Murray Children's Center, in Centralia, Illinois admitted its first patients on June 22. A total of 50 boys, age 6-11, were admitted during the center's first month of operation. During July, 50 girls, age 6-11, are expected to enter the center.

The first patients to be admitted to the mental retardation center were boys and girls who have been on the waiting list for Lincoln State School.

When all facilities are completed the center will accommodate 750 patients, age 6-20 with IQs of 50 or less.

Four cottages housing 100 patients each have been completed at the Murray Center, located at the west edge of Centralia on Illinois 161. Three other cottages with accommodations for 100 children each are under construction and expected to be completed later this year. In addition, there is a 50-bed hospital.

The Murray Center complex is comprised of 14 buildings; an administration building and hospital; community building; general services building; laundry; mechanical building; boiler plant; seven cottages; and a central dietary facility.

Construction was begun in March 1962 on a 120-acre site purchased by residents of Centralia for $88,000 and donated to the State of Illinois. All buildings are of brick construction. The design is contemporary.

Funds for construction of the Murray Center were appropriated by the 72nd General Assembly in 1961 from proceeds of the Mental Health bond issue. The center is part of Gov. Kerner's over-all plan to update Illinois mental health facilities.

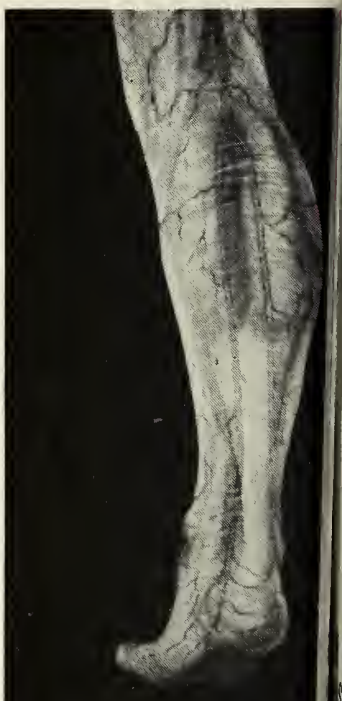
Dr. Sol Silverman is superintendent of the Murray Center, now staffed by 260 persons. This includes 100 persons who are completing a child care aide training course. According to Dr. Silverman, the staff eventually will total 1,000.

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(NYLIDRIN HCl)
increases blood flow...



IN CEREBROVASCULAR INSUFFICIENCY
where vascular insufficiency may cause such symptoms as mental confusion, diplopia, fatigue, apathy, and behavior problems.



IN PERIPHERAL VASCULAR DISEAS
where ischemia causes mu distress—pain, spasm, ac intermittent claudication; coldness, numbness or ulceration of extremities.

"Illinois is looked upon as a leader in the development of modern mental health treatment programs and the opening of the Murray Center is another step in this development. When the new zone centers open, beginning this fall, the whole nation will want to emulate Illinois," Gov. Kerner said.

"A word of praise also should go to the citizens of Centralia who donated the land for the Murray Center and who have cooperated magnificently with the Illinois Department of Mental Health during the construction period."

Dr. Harold Visotsky, state mental health director, said: "We are in the process of obtaining the finest professional staff available for the Murray Center and the zone centers under construction elsewhere throughout the state. The center will provide residential care for severely retarded children and feature strong out-patient services for the mentally retarded in the area surrounding Centralia. Treatment will depend on the child's education and development, with medical or nursing therapy provided when necessary."

There will be two treatment programs at the Centralia center. One will provide medical and nursing care for the severely retarded who need constant nursing care with medical supervision. These patients will receive care in the hospital and in two 100-bed infirmary units. The second will be focused largely on the developmental aspects of child care.

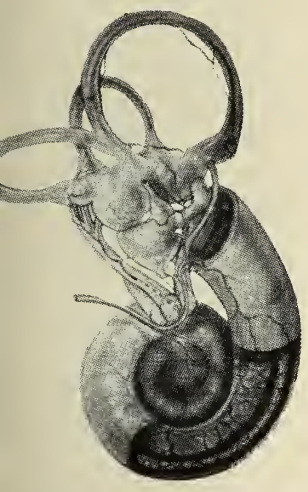
First Medical Instruction Conference

More than 160 representatives from five Canadian and 59 United States medical schools as well as a dozen medical and allied associations attended the first national conference on programmed medical instruction at the University of Rochester June 25 through 27.

Supported by a grant from Pfizer Laboratories, the conference was under the auspices of the University's School of Medicine and Dentistry and the College of Education.

Dr. Hilliard Jason, conference coordinator

(Continued on page 89)



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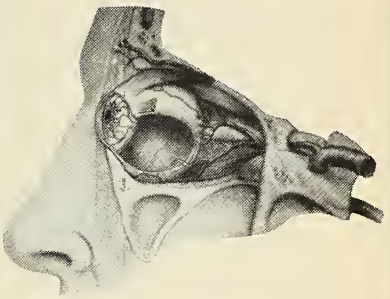
decreases resistance in arteries and arterioles in skeletal muscle, in the brain, and possibly in the eye and inner ear • increases cardiac output (minute stroke volume) without significant changes in pulse rate or blood pressure • especially useful in enhancing blood flow in ischemic tissues • essentially safe, well tolerated, with rapid and sustained response • economical

use with caution in the presence of a recent myocardial lesion, severe angina pectoris, and thyrotoxicosis.

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(Continued from page 87)
and associate in medical education at the University, noted that "In few other fields is there the same acute need for approaches that will render the educational process more efficient and effective. There is likely no field of human endeavor outside of medicine where knowledge is growing at such an accelerated rate and in which the need to keep abreast of this knowledge has implications for the lives and welfare of other people."

The meeting featured an introduction to programmed instruction.

IIT Microbiologist at International Symposia

Dr. Nicholas Grecz, first scientist to discover the important antibiotic formed by natural microorganisms in certain cheeses, will present his findings in Sweden this summer at the International Symposium on Food Microbiology.

An Illinois Institute of Technology microbiologist, Dr. Grecz, is also one of two American scientists invited to present papers at the Society for Applied Bacteriology Conference in Wales this summer. There, Grecz will present his most recent findings on *Clostridium botulinum*, the tiny bacterium which causes botulism, the deadliest form of food poisoning known.

A bacterium able to survive more than 2,000 times the radiation fatal to human beings, the botulinum is the most resistant of all microorganisms causing food spoilage. "Once we penetrate the secret of this bacteria's amazing resistance to nuclear radiation, we will be able to preserve food by radiation, a technique which will save millions of dollars in food waste and spoilage," Grecz asserted.

He cited the unique structure of the nucleus of the botulinum as one reason for its resistence. Radiation may strike the nucleus without destroying it. In fact, 80 to 100 targets within each nucleus must be hit by radiation before the botulinum is destroyed.

The National Institutes of Health recently awarded Dr. Grecz the 1964 Research Career Development award, which is granted to young scientists who have shown unusual potential for research in their fields. NIH will pay Grecz's full salary for a period of 5 years.



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Principles of Operative Surgery, Two Weeks, July 20
Basic Principles in General Surgery, Two Weeks, August 24
Board Review Course in Surgery, Part I, November 9; Part II, Aug. 3
Proctoscopy & Sigmoidoscopy, One Week, July 13, August 10
Varicose Veins, One Week, July 13, August 10
Fractures & Traumatic Surgery, Two Weeks, September 21
Gynecology, Office & Operative, Two Weeks, October 12
Vaginal Surgery, One Week, August 10, Sept. 14
Obstetrics, General & Surgical, Two Weeks, July 13, Sept. 21
Board Review Course in Gyn-Ob, Two Weeks, October 26
Fluids & Electrolytes, One Week, August 17
Pediatric Surgery, One Week, September 21
Hand Surgery, One Week, September 28
Surgery of Stomach & Duodenum, One Week, Sept. 21
Thoracic Surgery, One Week, September 28
Board Review Course in Medicine, Part I, September 21; Part II, November 30
Surgery of Face, Neck & Mouth, One Week, September 28

Information concerning numerous other continuation courses available upon request.

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Cancer in Children

Cancer has become increasingly important as a cause of death among children in the United States because of the marked rise in the child population and the decreased mortality from other causes, the statisticians of the Metropolitan Life Insurance Company report.

The actual death rate from the disease under age 15 has not changed materially in a decade. In 1959-61 the rate was 80.3 per million compared with 82.7 in 1949-51.

Among infants, the cancer death rate in this period recorded an appreciable reduction, and more limited decreases occurred among children 1 to 4 years of age. In contrast, the rates increased in the age range 5-14 years, the greatest rise being experienced by boys at ages 5-9.

The trend of childhood cancer mortality reflects largely changes in the death rate from leukemia, which accounts for about half of all cancer deaths under age 15. Cancers of the nervous system, most of which are brain tumors, became increasingly fatal during the decade. Deaths from cancer of urinary organs decreased.

"Some progress has been made in the treatment of childhood malignancies," the statisticians note. "For example, data from all Cancer Registries in the United States indicate that 27 per cent of the children under age 20 diagnosed as having acute leukemia in 1955-59 were alive one year after diagnosis; this compares with only about 4 per cent for those discovered in 1945-49. Currently some young victims of leukemia are shown to live several years after symptoms appear."

"While some advances are being made in prolonging the lives of children with various forms of cancer, the prognosis in most cases is still very unfavorable. To some extent this reflects difficulties and delay in diagnosis; many cases are not recognized to be of a malignant nature until the disease is well advanced. Much more important, however, is the fact that no effective therapy exists for most types of childhood malignancies. Nevertheless, the intensive program of therapeutic research now in progress, particularly the phase dealing with the use of radiation and chemotherapy, holds out further promise of improving the outlook for such children," the statisticians concluded.

"The Cost of Hope"

A new motion picture showing the drama that enfolds during a typical 24 hours in a community hospital is available on free loan from the American Hospital Association, 840 N. Lake Shore Drive, Chicago.

The half-hour documentary, "The Cost of Hope," was produced at Hackensack (N.J.) Hospital by the AHA and the Hospital Research and Educational Trust under a grant by Johnson & Johnson.

The film can be borrowed by Parent-Teacher Associations, women's clubs, hospitals, hospital auxiliaries, medical societies, local television stations and other civic and professional groups.

John Henderson, M.D., medical director of Johnson & Johnson, said the film helps explain that "hospital cost increases have been inevitable in order to provide the medical equipment and techniques necessary to modern health care."

The cast of "The Cost of Hope" includes patients, physicians, nurses, as well as pathologists, surgeons, x-ray technicians, pharamcists, ambulance drivers and others on the hospital staff.

"Milestones of Medicine"

A new series of public service programs on radio stations from coast to coast, called "Milestones of Medicine," has just been pioneered by Roche Laboratories, Division of Hoffmann-La Roche Inc.

Each episode of "Milestones of Medicine" describes a true incident, with every detail checked for accuracy, presented in a dramatic, interesting manner. Narrated by John Scott, the well-known news commentator of WOR, "Milesones of Medicine" tells listeners about incidents and contributions of physicians, hospitals, pharmacists and nurses.

There will be no mention of any Roche product on this program which will be exclusively devoted to a wide range of interesting medical subjects.

Starting June 22, this five-minute program is being broadcast five days a week on leading radio stations all over the country. A list of stations broadcasting "Milestones of Medicine" is available on request.



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Announcement on Drug Manual

In response to the request of the State Department of Public Aid, the Board of Trustees of the Illinois State Medical Society appointed a Sub-Committee of the Medical Advisory Committee to the Department of Public Aid in December, 1962, to serve in an advisory capacity to the Department on the project of developing a Drug Manual to be used by physicians when prescribing for recipients of public aid.

At the present time the Manual is being printed. The Department of Public Aid expects to mail it to participating physicians about July 15. The drug policies of the Department will become effective August 1, 1964.

SABIN VACCINE MANUFACTURER HELD BLAMELESS IN PORTLAND PARALYSIS CASE

Chas. Pfizer & Co., Inc. and the Sabin oral polio vaccine were held blameless recently by a Portland, Oregon jury in paralysis suffered two years ago by a Portland man.

The plaintiff, Daniel J. Ferguson, had claimed that he developed poliomyelitis after having taken Pfizer's Sabin type III vaccine during a community program in April of 1962.

Pfizer hailed the decision as exoneration of the oral polio vaccine. "While we are gratified by our own exoneration," a spokesman said, "we feel that the exoneration of the Sabin oral polio vaccine will maintain the confidence of both the medical profession and the American people in this vaccine as a vital tool in the final elimination of polio."

During the trial, witnesses described the extensive testing, both in animals and humans, to which all three types of Sabin polio vaccine were subjected before being licensed by the Division of Biologics Standards of the United

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States Public Health Service for distribution in the United States. In this country alone, Sabin vaccine was administered to about three quarters of a million persons prior to licensing and was administered to over 60 million persons in other parts of the world. In addition, they pointed out, each lot of the vaccine is also subjected to exhaustive testing.

GERMS SPREAD IN SINGING

Singing may be a "highly effective method" of spreading the tuberculosis germ from person to person.

The possibility that the germs are borne on the wings of song was suggested by an outbreak of primary tuberculosis in a boys' industrial school. The most likely source of infection was traced to a youth who sang in the choir.

The story of the outbreak and the subsequent detective work was told recently at the Annual Meeting of the American Thoracic Society, by Joseph H. Bates, M.D. of Little Rock, Ark.

Two cases of active tuberculosis were diagnosed among the 153 boys in the Arkansas Negro Boys Industrial School. All the boys had been given a skin test for tuberculous infection on admission and 127 were negative. Following the discovery of the active tuberculosis, all 127 boys were retested. It was found that 25 had converted from negative to positive.

One of the two cases of active tuberculosis was a boy who sang in the choir but did not attend classes. Of the 22 boys in the choir, 20 had been negative on entrance to the school but 12 of these, or 60 per cent, had become infected by the time the active case was discovered.

Compared with a rate of 19 per cent of converters among all the initially tuberculin negative boys, the 60 per cent rate among the choir boys was significant, according to Dr. Bates, who points out that the evidence supports the theory that the tuberculosis germ is spread by droplet nuclei expelled in coughing, sneezing, and the like. The theory is based on experiments conducted wth animals.

"The explanation for the high infection rate among the choir members," he said, "cannot be determined with certainty. However, it suggests that the act of singing may be a highly effective method for producing an infectious aerosol."

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Crippled Children Clinics for August

Seventeen clinics for Illinois' physically handicapped children have been scheduled for August by the University of Illinois, Division of Services for Crippled Children. The Division will count fourteen general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical social, and nursing service. There will be three special clinics for children with cardiac conditions and rheumatic fever. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

August 5—Alton Rheumatic Fever & Cardiac —Alton Memorial Hospital

August 5—Hinsdale—Hinsdale Sanitarium

August 6—Macomb — McDonough District Hospital

August 6—Litchfield—Madison Park School

August 11—East St. Louis—St. Mary's Hospital

August 11—Peoria General—Children's Hospital

August 12—Champaign-Urbana—McKinley Hospital

August 13—Springfield General — St. John's Hospital

August 14—Evanston—St. Francis Hospital

August 18—Belleville—St. Elizabeth's Hospital

August 19—Chicago Heights General — St. James Hospital

August 20—Rockford — Rockford Memorial Hospital

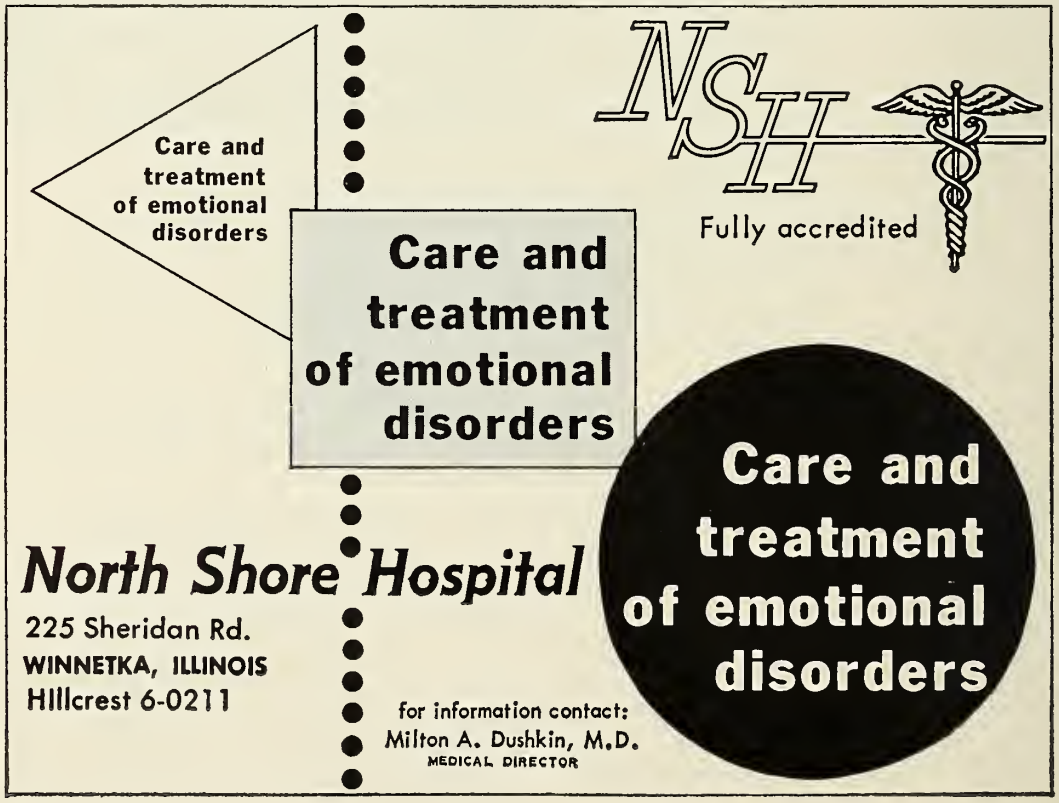
August 20—Bloomington General (A.M.) — St. Joseph's Hospital

August 20—Elmhurst Cardiac—Memorial Hospital of DuPage County

August 25—Peoria General—Children's Hospital

August 25—Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital

August 26—Aurora—Copley Memorial Hospital



Obituaries

Clarence A. Barnes*, Waukegan, died June 14, aged 71. A graduate of Rush Medical College in 1920, Doctor Barnes was voted physician of the year in 1958 and he retired in 1959.

Oscar J. Becker*, Glencoe, died May 17, aged 51. A graduate of the University of Illinois College of Medicine in 1936, Doctor Becker was an internationally known plastic surgeon. He was on the staff of Michael Reese, Weiss Memorial and Columbus hospitals and chairman of the plastic and reconstructive surgery committee of the American Academy of Ophthalmology & Otolaryngology.

Arthur S. Blonder, Chicago, died June 14, aged 28. A graduate of Northwestern University Medical School in 1961, he specialized in pathology.

Willard D. Brode, formerly of Evanston, Vero Beach, Florida, died May 10, aged 93. He was a graduate of Rush Medical College in 1893 and had practiced in Chicago until his retirement in 1952.

Jerome M. Brosnan*, Chicago, died June 5, aged 53. In 1936 he was a graduate of Loyola University School of Medicine where he had been an assistant clinical professor at the time of death. He was also chief radiologist and head of nuclear medicine at Little Company of Mary Hospital.

Jerome G. Brown, Chicago, died June 16, aged 24. Dr. Brown graduated from Northwestern University School of Medicine June 13, 1964.

Walter J. R. Camp*, Chicago, died June 18, aged 67. A graduate in 1923, he was a professor of toxicology at the University of Illinois College of Medicine, Department of Pharmacology. An officer in the American Academy of Forensic Sciences, Dr. Camp had served as state toxicologist for the last 16 years.

John D. Cantwell, Wilmette, died April 13, aged 86. In 1901 he was a graduate of the State University of Iowa College of Medicine. He was a veteran of World War I.

Ralph E. Carman, Carbondale, a graduate of Washington University School of Medicine in 1932, died in April, aged 70.

Clarence M. Dargan*, Pontiac, died June 7, aged 77. In 1914 he was a graduate of Northwestern University Medical School.

Charles M. Drueck, Chicago, died June 11, aged 58. A graduate of Northwestern University Medical School in 1929, Doctor Drueck was a surgeon and specialist in proctology and a member of several medical societies.

Alfred P. Eisenstaedt, Chicago, orginally from Germany, died May 24, aged 82. He was a graduate of Albert-Ludwigs-Universitat Medizinische Fakultat, Freiburg, Baden, in 1911.

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—Lucia, S. P.: "Wine as Food and Medicine," New York, The Blakiston Company, Inc., 1954.

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Noah D. Fabricant*, Chicago, died May 26, aged 59. A graduate of the University of Illinois College of Medicine in 1928, he specialized in E.N.T. A diplomate of the Amerian Board of Otolaryngology, Dr. Fabricant was a member of many medical societies.

Bernard J. Froelich, Chicago, died June 10, aged 59. He was staff physician at Downey.

John A. Havlicek*, Berwyn, died June 9, aged 52. He was a graduate of the University of Illinois College of Medicine in 1937 and senior staff member of St. Anne's Hospital at the time of death.

D. Stanford Hyde*, River Forest, died May 24, aged 62. He was a graduate of Northwestern University Medical School in 1938 and a staff member of both Lutheran Deaconess and Lutheran General hospitals.

Jules Kaplan*, Chicago, died June 7, aged 32. In 1957 he graduated from Northwestern University Medical School where he remained as a faculty member, specializing in otolaryngology.

August C. King*, Chicago, died May 12, aged 83. In 1914 he graduated from Chicago College of Medicine and Surgery.

John S. Lewis*, Carbondale, died May 8, aged 54. In 1937 he was a graduate of the University of Arkansas School of Medicine and specialized in surgery. Dr. Lewis was one of the founders and the president of the Southern Illinois Hospital Corp. and also a founding member of the American Board of Abdominal Surgeons.

George M. McClure*, Chicago, died May 31, aged 67. In 1933 he was a graduate of Chicago Medical College.

Luella E. Nadelhoffer O'Neil*, Evanston, died June 6, aged 66. In 1924 she graduated from Rush Medical College. An obstetrician and gynecologist, she was on the staff of both Evanston and St. Francis hospitals and taught at Northwestern University Medical School.

Albert L. Potts*, Gibson City, died May 25, aged 75. In 1923 he was a graduate of the University of Illinois College of Medicine. He was an Emeritus member of ISMS.

Donald R. Russ*, Chicago, died June 12, aged 41. In 1947 he was a graduate of the Western Reserve University School of Medicine, Cleveland. He was associate professor of pathology at the University of Illinois College of Medicine and director of the laboratories and blood bank at the University's Research and Educational Hospitals. Doctor Russ was a member of many medical organizations.

Russell F. Scott, Danville, died May 8, aged 86. He was a graduate of Rush Medical College in 1902.

Florence A. Stone*, Waukegan, died June 7, aged 79. A graduate of the University of Michigan Medical School in 1910, Dr. Stone specialized in radiology. She was an Emeritus member of ISMS.

Samuel S. Wallman*, Chicago, died January 13, aged 58. He was a graduate of Manchuria Medical College, Mukden, in 1945.

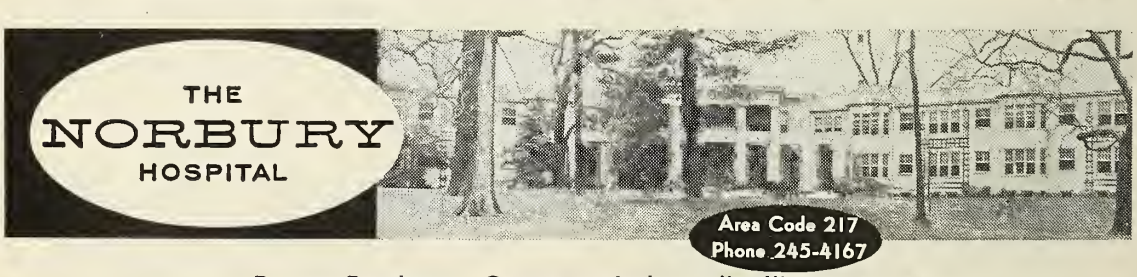
Joseph Welfeld, Chicago, died April 21, aged 89. A graduate of the Illinois Medical College in 1899, he was a pioneer in the field of urology and was also known for his work in dermatology. He had been a member of many medical organizations.

Virgil Wescott*, Chicago, died April 28, aged 72, in Wesley Memorial hospital where he had been a staff member. In 1919 he graduated from the College of Physicians and Surgeons, Los Angeles, specializing in ophthalmology.

Glenn E. Wright*, Woodstock, died May 5, aged 78. He was a graduate of Illinois Medical College in 1910 and retired from general practice in 1955.

Andrew R. E. Wyant*, Normal, died June 16, aged 97. Illinois' oldest physician, he was a graduate of the Chicago College of Medicine & Surgery in 1908. He retired in 1937. He was a member of the Fifty Year Club and an emeritur member of ISMS.

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Illinois Medical Journal

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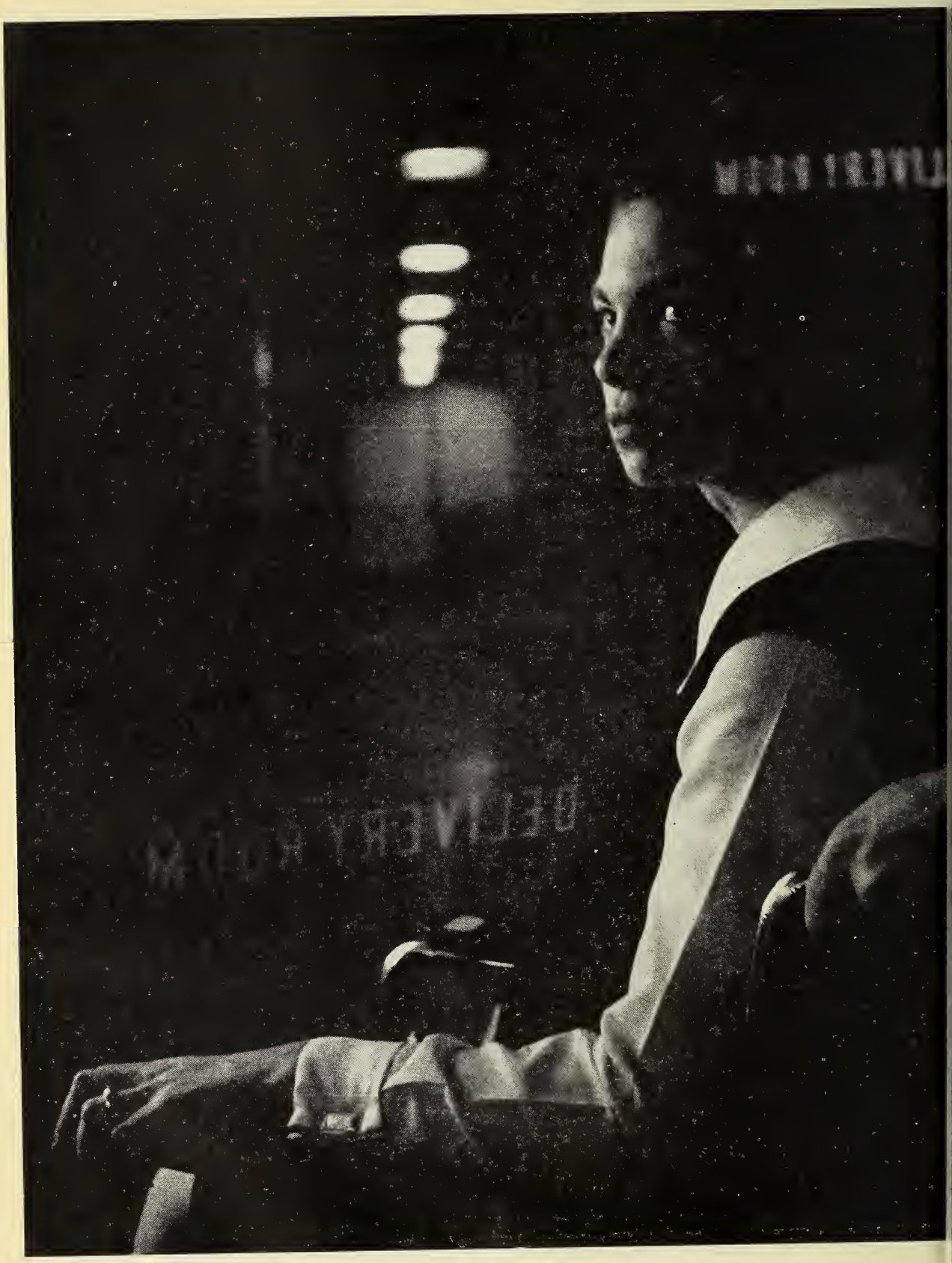
ABSTRACTS OF BOARD ACTIONS 111

Coming Next Month — The Revolution in Radiology

In the past 20 years, and especially since the advent of the atomic bomb, the science of radiology has advanced with meteoric rapidity. To relate these advances in straightforward, understandable terms to the non-specialist, the *Illinois Medical Journal* is pleased to present a Radiology Symposium for September. Coordinated by J. Ernest Breed, M.D., and written by such distinguished authorities as E. L. Powers, Ph.D., Robert D. Moseley, M.D., William T. Moss, M.D., L. D. Marinelli, M.A., and Lindon Seed, M.D., the symposium contains information that is both pertinent and practical for the non-specialist who wishes to stay abreast of this rapidly changing and expanding field.

Published monthly by the Illinois State Medical Society, 360 N. Michigan Avenue, Chicago 1, Ill. Subscription $5.00 per year, in advance, postage prepaid, for the United States, Cuba, Puerto Rico, Philippine Islands, and Mexico. $7.50 per year for all foreign countries included in the postal union. Canada, $5.50. Single current copies available at cost of 75 cents.
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when fear of labor reflects



Abstracts of Board Actions

Meeting of July 18-19, 1964

ISMS Views Presented to Republican Platform Committee

Dr. V. P. Siegel, Chairman of the Committee on Legislation, appeared before the platform committee of the Republican Party during the convention in San Francisco and presented the views of the Illinois State Medical Society. The presentation was well received and the plank developed by the Committee was in complete accord with the ISMS statement. Copies of Dr. Siegel's paper may be had by writing to the ISMS. Dr. Frank Jirka, Jr. will appear before the Democratic Platform Committee in Altantic City this month with a similar presentation.

Committee on Fee Schedules Recommends Medicare Contract

Dr. George Lull, Chairman of the Committee on Fee Schedules, recommended that the Board renew the Medicare contract (providing care for the dependents of men in service at home by the physician of their choice) without negotiation. In view of the few complaints about the existing contract, the Board approved renewal without negotiation at this time.

Special Committee to Review Public Aid Fees

The Advisory Committee to the Department of Public Aid requested the appointment of a sub-committee on Fees for Recipients of Public Aid. The Board authorized the Committee on Fee Schedules and the chairman and four members of the Advisory Committee to serve this function. The sub-committee must meet before August 15 because the public aid budget will be submitted Sept. 1. The proposed budget will include funds for the payment of physicians in Cook County. Dr. Fred A. Tworoger, Chairman, also suggested that county medical societies be advised that the ISMS Advisory Committee will be happy to discuss the program before meetings of county medical societies.

Annual Legislative Conference to Follow Election

The Committee on Legislation received budget approval for its annual legislative conference for county medical society chairmen. The Committee will pay travel costs for one representative from each county to the conference which will be in Chicago early in November.

ISMS Supports Vigorous Enforcement of Medical Practice Act

The Department of Registration and Education has interpreted the Medical Practice Act as requiring that "any person who holds himself to be a physician and works in a hospital, MUST BE LICENSED regardless of whether or not he works under supervision." This includes foreign physicians working in the emergency room and all physicians serving as operating room technicians. The Board of Trustees voted to support the Medical Examining Committee and the Department of Registration and Education in their efforts to enforce the Medical Practice Act in its entirety.

PR Committee Reports Success of New Projects

Sixty-seven Illinois radio stations are now using material from the PR kit, "When the Physician Speaks, the Public Listens."

Public health messages are scheduled to appear on 170 billboards throughout the state and in 1,000 subway cars and busses in Chicago. These will promote tetanus and measles immunizations to start and later will carry advice on tuberculosis, heart disease, cancer and other health subjects. The cost of the printing for the project will be borne by pharmaceutical companies and voluntary health agencies. The space is allocated by the Foster-Kleiser Outdoor Advertising Company.

Educational and Scientific Foundation Presents Film on Multiple Births

Dr. Harlan English, Chairman of the Board of the Educational & Scientific Foundation of ISMS, introduced a 20-minute color and sound film, "Modern Management of Multiple Births" which was produced by the Foundation. The film reviews the problems and emphasizes the special prenatal care needed to reduce morbidity and mortality in all multiple births, from twins on up. The film will be available from the Foundation shortly for county society and hospital staff meetings. It uses the protocol and actual delivery of quadruplets at Michael Reese Hospital to illustrate its points.

Hospital Planning Council Expansion Plans Approved

The Hospital Planning Council of Greater Chicago has indicated it will establish a professional advisory committee which will include physicians, hospital administrators, nurses and architects to study hospital planning procedures, criteria guidelines, planning objectives of health care facilities and special study projects. ISMS approval to proceed in Cook, DuPage, Lake, Will, Grundy and Kane counties was requested and granted. The Board asked that a member of ISMS be a member of the Professional Advisory Committee to keep the ISMS Board informed.

Executive Committee to Study Public Health Department Program

Dr. Franklin D. Yoder, Director of the Department of Public Health, presented an outline of the problems dealing with the establishment of local health departments and stressed the importance of physician leadership in the area of public health through the facilities of local health departments. In reply to his request for a Committee to Study the Public Health Department Program, the Executive Committee was designated to serve in this function and report to the Board as soon as possible.

Short Summaries of Other Items on Board Agenda

Dr. Edward W. Cannady, Speaker of the House of Delegates, asked for suggestions from all members of the House for the improvement of the 1965 meeting.

Dr. George Callahan announced the first annual meeting of the Illinois Association of Professions at the Ambassador Hotel in Chicago on Saturday, Sept. 19. A brochure on the organization will be mailed to each ISMS member in August. Any member of ISMS is eligible to join.

The Board decreed that the legal staff of ISMS would only answer inquiries originating from officers, trustees, committee chairmen and county medical society officers.



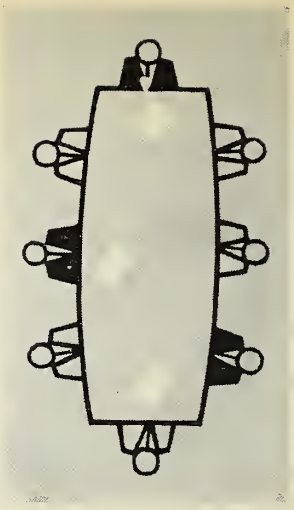
Foreword

HAVE YOU YEARNED for an up-to-date reference issue covering the activities of your state medical society and the activities of government in your state regarding medical affairs? This issue of the *Illinois Medical Journal* is your introduction to what we hope may be an annual reference issue, giving current information pertaining to activities of your State Society and its affiliated medical groups as well as positions of medical leaders as they give Illinois not only good responsible medical leadership but also good government.

We solicit your interest in the Annual Reference Issue and seek your criticisms and suggestions to improve it in the years to come. Your interest, advice and counsel will aid us greatly to make this a useful reference guide.

E. A. Piszczek M.D.

EDWARD A. PISZCZEK, M.D.
PRESIDENT



ISMS Organization

History of Founding and Expansion

TWENTY-NINE PHYSICIANS met in Springfield June 4, 1850, and organized the Illinois State Medical Society. They were concerned with the solution of ethical, scientific, legislative and economic problems. The first Constitution and Bylaws and the first Code of Medical Ethics were adopted; the first legislative committee was appointed, and a resolution outlining the beginnings of interprofessional relations was approved.

The Legislative Committee was instructed to "memorialize the legislature at its next session, praying the enactment of a statute providing for the registration of Births, Deaths and Marriages." The resolution ruled that "members of the Society will discourage the sale of patent or secret nostrums on the part of Druggists and Apothecaries throughout the State, and will patronize insofar as practicable, only those who abstain from the sale of such patent or secret nostrums."

The first full time secretary of the Society was Dr. Harold M. Camp who served for over 35 years until his death in 1958. The first executive administrator, Robert L. Richards, was employed at the time the office was moved to Chicago in 1960.

The Society published the early transactions in book form presenting not only the minutes of the House of Delegates, but also all scientific papers given at each annual convention. In 1898 a new era of communications began, for at that time, the *Illinois Medical Journal* was established and became the first "official organ of the Society."

Dr. G. N. Kreider was its first editor and served until 1913, followed by Dr. Clyde D. Pence with Dr. Henry G. Olds as the first managing editor. Dr. Charles G. Whalen became editor in 1919 and he and Dr. Olds served until they died in 1940. Dr. Camp followed Dr. Whalen and Dr. Theodore R. Van Dellen is the editor today.

Dr. Whalen spearheaded many important activities in medicine, and has been called "the outstanding champion of the medical profession in its economic contacts." He has been credited as one of the first medical editors to blast "the socialization of medicine in this country." In 1922 he wrote extensively on state medicine, workmen's compensation, compulsory health insurance, free hospitalization and federal aid.

The first Fifty Year Club in the United States was announced by the *Illinois Medical Journal* in 1938.

The fourth largest medical society in the country has developed from these embryonic beginnings. This edition of the *Illinois Medical Journal* offers you an opportunity to contrast the extensive services available to the membership today with those offered in the past.

List of Officers and Places of Meeting Since Organization of the Society

Year	President	Secretary	Treasurer	Meeting Place
1840	John Todd	David Prince		Springfield
1850	Rudolph Rouse	Edwin G. Meek		Springfield
1850	William B. Herrick	Edwin G. Meek	Jno. Halderman	Springfield
1851	Samuel Thompson	H. Shoemaker	R. Rouse	Peoria
1852	Rudolph Rouse	E. S. Cooper	Edw. Dickenson	Jacksonville
1853	Daniel Brainerd	H. A. Johnson	A. B. Chambers	Chicago
1854	C. N. Andrews	H. A. Johnson	N. S. Davis	LaSalle
1855	N. S. Davis	E. Andrews	J. V. Z. Blaney	Bloomington
1856	H. Noble	N. S. Davis	J. V. Z. Blaney	Vandalia
1857	C. Goodbreak	H. A. Johnson	J. V. Z. Blaney	Chicago
1858	H. A. Johnson	N. S. Davis	J. W. Freer	Rockford
1859	David Prince	N. S. Davis	J. W. Freer	Decatur
1860	Wm. M. Chambers	N. S. Davis	J. W. Freer	Paris
1863	A. McFarland	N. S. Davis	J. H. Hollister	Jacksonville
1864	A. H. Luce	N. S. Davis	J. H. Hollister	Chicago
1865	J. M. Steele	N. S. Davis	J. H. Hollister	Bloomington
1866	F. F. Haller	N. S. Davis	J. H. Hollister	Decatur
1867	H. Noble	N. S. Davis	J. H. Hollister	Springfield
1868	S. T. Trowbridge	N. S. Davis	J. H. Hollister	Quincy
1869	S. T. Trowbridge	T. D. Fitch	J. H. Hollister	Chicago
1870	J. V. Z. Blaney	T. D. Fitch	J. H. Hollister	Dixon
1871	G. W. Albin	T. D. Fitch	J. H. Hollister	Peoria
1872	J. O. Hamilton	T. D. Fitch	J. H. Hollister	Rock Island
1873	D. W. Young	T. D. Fitch	J. H. Hollister	Bloomington
1874	T. F. Worrell	T. D. Fitch	J. H. Hollister	Chicago
1875	J. H. Hollister	T. D. Fitch	Wm. E. Quine	Jacksonville
1876	T. D. Washburn	N. S. Davis	J. H. Hollister	Urbana
1877	T. D. Fitch	N. S. Davis	J. H. Hollister	Chicago
1878	J. L. White	N. S. Davis	J. H. Hollister	Springfield
1879	E. P. Cook	N. S. Davis	J. H. Hollister	Lincoln
1880	Ephraim Ingalls	N. S. Davis	J. H. Hollister	Belleville
1881	G. W. Jones	S. J. Jones	J. H. Hollister	Chicago
1882	Robert Boal	S. J. Jones	J. H. Hollister	Quincy
1883	A. T. Darrah	S. J. Jones	J. H. Hollister	Peoria
1884	E. Andrews	S. J. Jones	Walter Hay	Chicago
1885	D. S. Booth	S. J. Jones	Walter Hay	Springfield
1886	Wm. a Byrd	S. J. Jones	Walter Hay	Bloomington
1887	Wm. T. Kirk	D. W. Graham	Walter Hay	Chicago
1888	Wm. O. Ensign	D. W. Graham	Walter Hay	Rock Island
1889	C. W. Earle	D. W. Graham	T. W. McIlvaine	Jacksonville
1890	John Wright	D. W. Graham	T. W. McIlvaine	Chicago
1891	Jno. P. Mathews	D. W. Graham	Geo. N. Kreider	Springfield
1892	Charles C. Hunt	D. W. Graham	Geo. N. Kreider	Vandalia
1893	E. Fletcher Ingals	D. W. Graham	Geo. N. Kreider	Chicago
1894	Otho B. Will	J. B. Hamilton	Geo. N. Kreider	Decatur
1895	Daniel R. Brower	J. B. Hamilton	Geo. N. Kreider	Springfield
1896	D. W. Graham	J. B. Hamilton	Geo. N. Kreider	Ottawa
1897	A. C. Corr	J. B. Hamilton	Geo. N. Kreider	East St. Louis
1898	J. N. G. Carter	E. W. Weis	Geo. N. Kreider	Galesburg
1899	J. T. Pitner	E. W. Weis	Geo. N. Kreider	Cairo
1900	H. N. Moyer	E. W. Weis	Geo. N. Kreider	Springfield
1901	G. N. Kreider	E. W. Weis	E. J. Brown	Peoria
1902	J. T. McAnally	E. W. Weis	E. J. Brown	Quincy
1903	M. L. Harris	E. W. Weis	E. J. Brown	Chicago
1904	C. E. Black	E. W. Weis	E. J. Brown	Bloomington
1905	W. E. Quine	E. W. Weis	E. J. Brown	Rock Island
1906	H. C. Mitchell	E. W. Weis	E. J. Brown	Springfield
1907	J. F. Percy	E. W. Weis	E. J. Brown	Rockford
1908	W. L. Baum	E. W. Weis	E. J. Brown	Peoria
1909	J. W. Pettit	E. W. Weis	E. J. Brown	Quincy
1910	J. L. Wiggins	E. W. Weis	E. J. Brown	Danville
1911	A. C. Cotton	E. W. Weis	E. J. Brown	Aurora
1912	W. K. Newcomb	E. W. Weis	E. J. Brown	Springfield

Year	President	Secretary	Treasurer	Meeting Place
1913	L. H. A. Nickerson	E. W. Weis	A. J. Markley	Peoria
1914	Charles J. Whalen	W. H. Gilmore	A. J. Markley	Decatur
1915	A. L. Brittin	W. H. Gilmore	A. J. Markley	Springfield
1916	C. W. Lillie	W. H. Gilmore	A. J. Markley	Champaign
1917	W. L. Noble	W. H. Gilmore	A. J. Markley	Bloomington
1918	E. B. Coolley	W. H. Gilmore	A. J. Markley	Springfield
1919	E. W. Fiegenbaum	W. H. Gilmore	A. J. Markley	Peoria
1920	J. W. Van Derslice	W. H. Gilmore	A. J. Markley	Rockford
1921	W. F. Grinstead	W. H. Gilmore	A. J. Markley	Springfield
1922	Charles Humiston	W. H. Gilmore	A. J. Markley	Chicago
1923	E. P. Sloan	W. D. Chapman	A. J. Markley	Decatur
1924	E. H. Ochsner	W. D. Chapman	A. J. Markley	Springfield
1925	L. C. Taylor	H. M. Camp	A. J. Markley	Quincy
1926	J. C. Krafft	H. M. Camp	A. J. Markley	Champaign
1927	Mather Pfeiffenberger	H. M. Camp	A. J. Markley	Moline
1928	G. Henry Mundt	H. M. Camp	A. J. Markley	Chicago
1929	J. E. Tuite	H. M. Camp	A. J. Markley	Peoria
1930	F. O. Fredrickson	H. M. Camp	A. J. Markley	Joliet
1931	Wm. D. Chapman	H. M. Camp	A. J. Markley	East St. Louis
1932	R. R. Ferguson	H. M. Camp	A. J. Markley	Springfield
1933	John R. Neal	H. M. Camp	A. J. Markley	Peoria
1934	Philip H. Kreuscher	H. M. Camp	A. J. Markley	Springfield
1935	Charles D. Center* (Past President-Elect)			
1935	Charles S. Skaggs	H. M. Camp	A. J. Markley	Rockford
1936	Chas. B. Reed	H. M. Camp	A. J. Markley	Springfield
1937	Rolland L. Green	H. M. Camp	A. J. Markley	Peoria
1938	R. K. Packard	H. M. Camp	A. J. Markley	Springfield
1939	S. E. Munson	H. M. Camp	A. J. Markley	Rockford
1940	Jas. H. Hutton	H. M. Camp	A. J. Markley	Peoria
1941	J. S. Templeton	H. M. Camp	A. J. Markley	Chicago
1942	Chas. H. Phifer	H. M. Camp	H. M. Camp	Springfield
1943	E. H. Weld	H. M. Camp	H. M. Camp	Chicago
1944	G. W. Post**	H. M. Camp	H. M. Camp	Chicago
1945	E. P. Coleman***	H. M. Camp	H. M. Camp	
1946	E. P. Coleman	H. M. Camp	H. M. Camp	Chicago
1947	R. S. Berghoff	H. M. Camp	H. M. Camp	Chicago
1948	I. H. Neece	H. M. Camp	H. M. Camp	Chicago
1949	Percy E. Hopkins	H. M. Camp	H. M. Camp	Chicago
1950	Walter Stevenson	H. M. Camp	H. M. Camp	Springfield
1951	Harry M. Hedge	H. M. Camp	H. M. Camp	Chicago
1952	C. Paul White	H. M. Camp	H. M. Camp	Chicago
1953	Leo P. A. Sweeney	H. M. Camp	H. M. Camp	Chicago
1954	Willis I. Lewis	H. M. Camp	H. M. Camp	Chicago
1955	Arkell M. Vaughn	H. M. Camp	H. M. Camp	Chicago
1956	F. Garm Norbury	H. M. Camp	H. M. Camp	Chicago
1957	F. Lee Stone	H. M. Camp	H. M. Camp	Chicago
1958	Lester S. Reavley	H. M. Camp	H. M. Camp	Chicago
1959	Raleigh C. Oldfield	H. M. Camp	H. M. Camp	Chicago
1960	Joseph T. O'Neill	George F. Lull	George F. Lull	Chicago
1961	H. Close Hesseltine	Jacob E. Reisch	Jacob E. Reisch	Chicago
1962	Edwin S. Hamilton	Jacob E. Reisch	Jacob E. Reisch	Chicago
1963	George F. Lull	Jacob E. Reisch	Jacob E. Reisch	Chicago
1964	Harlan English	Jacob E. Reisch	Jacob E. Reisch	Chicago
1965	Edward A. Piszczek	Jacob E. Reisch	Jacob E. Reisch	Chicago

*Died before induction into office

**Died in office. Term completed by Robert S. Berghoff, First Vice President

***Meeting cancelled 1945

Principles of Medical Ethics

PREAMBLE: These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

SECTION 1—The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

SECTION 2—Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

SECTION 3—A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

SECTION 4—The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

SECTION 5—A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

SECTION 6—A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

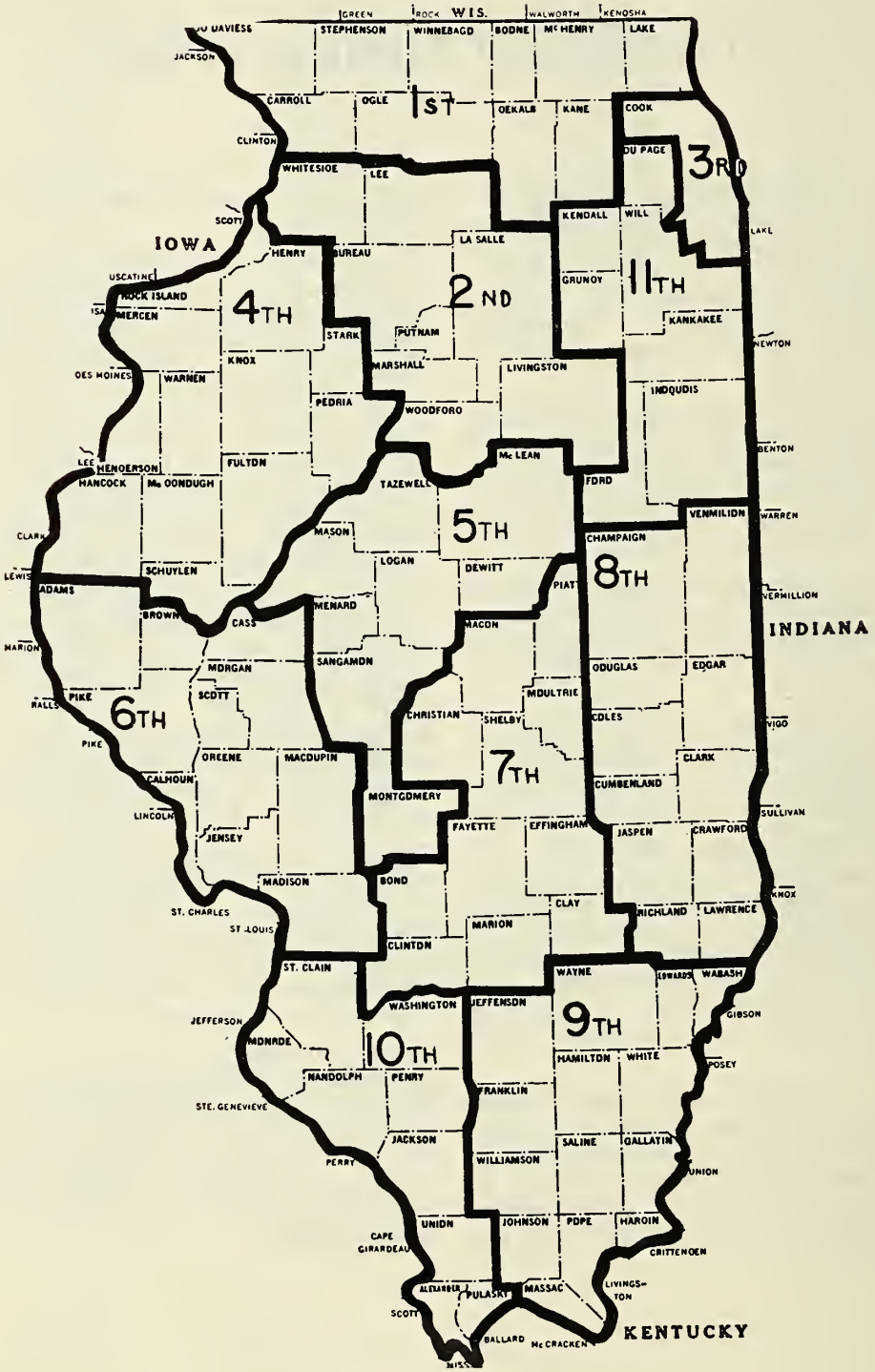
SECTION 7—In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

SECTION 8—A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

SECTION 9—A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

SECTION 10—The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

MAP OF TRUSTEE DISTRICTS



Constitution and Bylaws
MAY 1964

Adopted, 1903
As Amended 1964

Constitution

ARTICLE I. NAME

The name and title of this organization shall be the Illinois State Medical Society.

ARTICLE II. PURPOSES OF THE SOCIETY

The purposes of this Society are to promote the science and art of medicine, to protect the public health, to elevate the standards of medical education and to unite the medical profession behind these purposes; to promote similar interests in the component societies and to unite with similar organizations in other states and territories of the United States to form the American Medical Association. The Society shall inform the public and the profession concerning the advancements in medical science and the advantages of proper medical care.

ARTICLE III. COMPONENT SOCIETIES

Component societies shall consist of those county medical societies which hold charters from this Society.

ARTICLE IV. COMPOSITION OF THE SOCIETY

The Society shall consist of active members and such other members as the Bylaws may provide.

ARTICLE V. HOUSE OF DELEGATES

Section 1. The House of Delegates shall be the legislative body of the Illinois State Medical Society, and unless otherwise herein provided, its deliberations shall be binding upon the officers, including the Board of Trustees. The House of Delegates shall set the basic policy and philosophy of the Society.

Section 2. The House of Delegates shall elect the general officers, except as otherwise provided in the Bylaws.

ARTICLE VI. BOARD OF TRUSTEES

The Board of Trustees, whose duties are executive and judicial, shall have charge of all property and all financial affairs of the Society, and shall perform such other duties as are prescribed by law governing the directors of corporations, or as may be prescribed in the Bylaws.

ARTICLE VII. CONVENTIONS AND MEETINGS

The Society shall hold an annual convention during which there shall be a business meeting of the House of Delegates and general scientific meetings which shall be open to all registered members.

ARTICLE VIII. OFFICERS

The officers of this Society shall be a president, a president-elect, a first vice president, a second vice president, a secretary-treasurer, a speaker and vice speaker of the House of Delegates, sixteen trustees and one trustee at large, and such other officers as the Bylaws may provide.

ARTICLE IX. THE SEAL

This Society shall have a common seal with power to break, change or renew the same when necessary.

ARTICLE X. AMENDMENTS

The House of Delegates may amend this Constitution at any annual business meeting of the House of Delegates provided that the amendment shall have been proposed at the preceding annual business meeting, and that two-thirds of the members of the House of Delegates seated concur in the amendment.

Bylaws

CHAPTER I. MEMBERSHIP

Section 1. *Members.*

(a) *Active Members.* The active members of this Society shall consist of regular members, emeritus members, retired members, provisional members, intern members and residency members. Active

members shall enjoy full privileges which include membership in the American Medical Association.

(b) *Honorary Members.* Honorary members shall be those physicians of Illinois or other states or foreign countries who have risen to prominence in the profession and who may be elected by a nine-tenths vote of the House of Delegates at any annual meeting. They shall not be entitled to vote or hold office, nor shall they be counted as members in determining the number of delegates to the American Medical Association.

Section 2. *Qualifications for Membership.*

(a) Every physician duly licensed and registered in the State of Illinois to practice medicine in all its branches who is a graduate of a medical school approved in United States or Canada, a resident of the State of Illinois, a citizen of the United States, who is of good moral character and professional standing, and a member of his component medical society, shall be eligible for regular membership.

(b) Provisional membership shall be available to any Illinois physician who has made a declaration of intention to become a citizen of the United States, who has received a license in this State to practice medicine in all of its branches, and who—with the exception of United States citizenship—possesses all of the qualifications for membership prescribed by these Bylaws. Provisional membership shall terminate one year after the expiration of the minimum period of time within which such member could have perfected his citizenship. After obtaining full citizenship and prior to the expiration of his provisional membership, such member may be, upon application to his component medical society, transferred to regular membership.

(c) The following shall also be eligible if approved and recommended by the component medical society:

(1) every physician serving as a full time employee at the headquarters of the American Medical Association;

(2) Physicians serving as medical officers in the United States Army, Navy, Air Force, the U. S. Public Health Service, and those serving full time in the Veterans Administration who are members of a component society, so long as they are engaged actively in their respective service, and thereafter, if they have been retired on account of age or physical disability, or after long and honorable service under the provision of an Act of Congress;

(d) Physicians otherwise eligible for membership, and licensed in one of the States of the Union, but not licensed in Illinois, and who are not engaged in the active practice of medicine, but otherwise employed in an allied medical activity which does not require licensure, shall be eligible for membership if approved and recommended by the component medical society and approved by the Board of Trustees.

Section 3. *Emeritus Members.* A member who has been in good standing for thirty-five years and who has reached the age of seventy, may upon application to and upon recommendation of his component society, be made an emeritus member and have all the rights and privileges of membership without the payment of dues to the component or state society.

Credit for membership in other American Medical Association constituent societies shall be accorded transferees, provided they have been members of this Society for a least five years.

Section 4. *Retired Members.* A member who has been in good standing but who by reason of age or incapacity, has retired from active practice, may upon application to and upon recommendation of his component society, be made a retired member, without payment of dues to the component or state society.

Section 5. *Intern Members.* Any person who is a graduate of a medical school approved in the United States or Canada, who is of good moral character and professional standing and who is serving an internship in any hospital in the State of Illinois approved by the Council on Medical Education and Hospitals of the American Medical Association, is eligible for intern membership upon the recommendation of any two members of this Society who are also members of his hospital staff.

The physician's intern membership shall cease at the end of the year in which his internship training terminates, and if he wishes to become a member of this Society, he must apply for a residency or regular membership through his component society. Dues for intern membership shall be minimal.

Section 6. *Residency Members.* After being licensed to practice medicine, a physician serving full time as a resident in a residency approved by the American Medical Association, is eligible for full membership at a special rate.

The special rate shall be $2.00 per capita per annum.

A residency member must be a graduate of a medical school approved in the United States or Canada, have a degree of Doctor of Medicine or its equivalent, and must be a member in good standing of his component society.

The physician's residency membership shall cease at the end of the year in which his residency training terminates, and if he wishes to become a member of this Society, he must apply for regular membership through his component society.

Section 7. *Guests.* Any distinguished physician not a resident of this State, may become a guest of this Society and shall be accorded the privilege of participating in all of the scientific work for that convention.

Section 8. *Tenure of Membership.* The name of a physician on the properly certified roster of members of a component society which has paid its annual assessments, shall be prima facie evidence of membership in this Society, and afford all the rights and privileges pertaining thereto.

Section 9. *Withdrawal of Privileges.* No person who is under sentence of suspension or expulsion from a component society, shall be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of the proceedings until he has been reinstated.

CHAPTER II. ANNUAL CONVENTIONS

Section 1. *Date.* The Board of Trustees shall determine the date for the annual convention.

Section 2. *Meeting Place.* The meeting place for the annual convention shall be determined by the House of Delegates from a list of cities extending invitations, subject to investigation of the facilities and approval by the Board of Trustees.

Section 3. *Scientific Meetings.*

(a) With the consent of the House of Delegates or the Board of Trustees any special group may conduct its meeting in connection with the annual convention of this Society.

(b) For the transaction of scientific business, there shall be one or more sections as may be determined from year to year by the Board of Trustees.

(c) The election of section officers for the succeeding year shall be the first order of business at the section meeting.

(d) The officers of the sections shall arrange the scientific program for the section in cooperation with the Committee on Scientific Assembly.

(e) All registered members may attend and participate in the proceedings and discussions of the general scientific meetings and of the section meetings.

(f) The general scientific meetings may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and to the public.

(g) All papers read before the Society or any section thereof, shall become the property of the Society. Each paper shall be deposited with the secretary when read, and presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already been published.

(h) The Board of Trustees shall be entirely responsible for the annual convention.

CHAPTER III. THE HOUSE OF DELEGATES

Section 1. *Composition.* The House of Delegates shall consist of (a) delegates elected by the component societies; (b) the officers of the Society; (c) the past presidents; (d) both general officers and members of the House of Delegates of the American Medical Association from the Illinois State Medical Society. Past Trustees shall be members of the House of Delegates without the right to vote.

Section 2. *Meetings.* The House of Delegates shall meet at the time and place of the annual convention of the Society, and shall fix its hours of meeting so that they shall not conflict with the general scientific meetings of the Society. If the interests of the Society and the profession require, the House of Delegates may meet in advance of the general scientific meetings.

Section 3. *Quorum.* Fifty delegates representing not less than twenty component societies shall constitute a quorum for the transaction of business.

Section 4. *Special Meetings.* Special meetings of the House of Delegates may be called by the president or a majority of the Board of Trustees, or shall be called on petition of twenty component societies.

When a special meeting is thus called, the secretary shall mail a notice to the last known address of each member of the House of Delegates at least ten days before the special meeting is to be held. The notice shall specify the time and place of the meeting and the purpose for which the meeting is called. The meeting shall not consider any business except that for which it was called.

Section 5. *Delegates.* Each component society shall be entitled to send to the House of Dele-

gates each year, one delegate for each 75 members, and one for a major fraction thereof; but each component society which has made its annual report and paid its assessment as provided for in this Constitution and Bylaws, shall be entitled to one delegate.

The term of office of a delegate shall begin January 1, and shall be for two years, or until his successor has been elected. Component societies with one delegate only, may elect for one year.

Section 6. *Registration.* Before being seated at any annual or special session, each delegate or his alternate shall deposit with the Reference Committee on Credentials a certificate signed by the president and/or the secretary of the component society, stating that the delegate or alternate has been regularly elected to the House of Delegates.

A delegate or his alternate may be seated without credentials, provided he is properly identified by his county society and so certified to the secretary of the Illinois State Medical Society.

When a delegate and his alternate are unable to attend a specified meeting, the appropriate authorities of the component society concerned may appoint a substitute delegate and a substitute alternate who on presenting proper credentials, shall be eligible to regular membership in the House of Delegates.

A delegate whose credentials have been accepted by the Reference Committee on Credentials and whose name has been placed on the roll of the House, shall remain a delegate until final adjournment of that meeting. If a delegate, once seated, is unable to be present for reasons acceptable to the Committee on Credentials, an alternate may be certified by that Committee. After the alternate has been seated, he cannot be replaced.

Section 7. *AMA Delegates and Alternate Delegates.* The House of Delegates shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

Section 8. *District Divisions.* The House of Delegates shall divide the state into districts, specifying which counties each district shall include.

Section 9. *Committees.* The House of Delegates shall have authority to designate to serve on ad hoc committees, members of the Society who are not members of the House and who may be present to participate in the debate on their reports.

Section 10. *Memorials and Resolutions.* It shall approve all memorials and resolutions issued in the name of the Society before they shall become effective.

CHAPTER IV. ELECTION OF OFFICERS

Section 1. *Officers.* The officers of this Society shall consist of the president, president-elect, first and second vice presidents, secretary-treasurer, speaker and vice speaker, sixteen trustees and one trustee-at-large.

Section 2. *Elections.* All elections shall be by ballot except when there is only one candidate for a given office, then election may be by voice vote.

The majority of votes cast shall be necessary to elect.

The election of officers, members of standing committees, delegates and alternate delegates to the American Medical Association, shall be the first order of business at the last session of the House of Delegates. Officers of the Society shall assume office at the adjournment of the annual business meeting.

Section 3. *Terms of Office.* The president-elect, vice presidents, secretary-treasurer, the speaker and vice speaker shall be elected annually by the House of Delegates to serve for a term of one year.

Members of the Board of Trustees shall be elected by the House of Delegates to serve for a term of three years.

The speaker and vice speaker shall not be elected for more than three consecutive terms to their respective offices; they shall be elected from the membership of the House of Delegates.

The president-elect shall be inducted into the office of president by the retiring president during the final session of the House of Delegates. After assuming office at the adjournment of the annual business meeting, he shall continue in office until his successor has been elected and installed. Following his retirement as president, he shall automatically become a trustee-at-large for a term of one year.

CHAPTER V. DUTIES OF OFFICERS

Section 1. *The President.* The president of the Illinois State Medical Society shall lead the Society in all its functions. He shall deliver an annual address at such time as may be arranged, and perform such other duties as custom and parliamentary usage may require.

The president shall appoint all non-elective committees of the House of Delegates. He may seek the advice of the officers and trustees.

He shall preside at the general scientific meetings of the Society or designate one of the vice presidents to substitute for him.

Section 2. *Successor to President.* In the event of the president's death, resignation, or removal from office, the first vice president shall succeed to the presidency.

Section 3. *Successor to President-Elect.* In the case of death, resignation, or removal from office

of the president-elect, the office shall be filled by the House of Delegates at the next annual convention by election at a time recommended by the Reference Committee on Rules and Order of Business.

Section 4. *The Speaker.* The speaker, who shall be versed in parliamentary procedure, shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require.

He shall announce the reference committees appointed in consultation with the president, the president-elect and the vice speaker of the Society.

He shall be an ex-officio member of the Committee on Constitution and Bylaws.

Section 5. *The Vice Speaker.* The vice speaker shall preside for the speaker in the latter's absence or at his request. In case of death, resignation or inability of the speaker to perform his duties, the vice-speaker shall serve during the unexpired term.

Section 6. *The Secretary-Treasurer.* In addition to the rights and duties ordinarily devolving on the secretary of a corporation by law, custom or parliamentary usage, and those granted or imposed in other provisions of the Constitution and these Bylaws, the secretary-treasurer shall be the official custodian of all securities and the income therefrom, owned by the Society, subject to the direction and disposition of the Board of Trustees. He shall be a member of the Finance Committee of the Board of Trustees.

The Board of Trustees may select a bank or trust company to act as custodian in the place of the secretary-treasurer, of all or any part of such securities and to act as agent of the Society in collecting the income therefrom.

The secretary-treasurer shall give bond in such sum as may be fixed by the Board of Trustees, the premium on such bond to be paid by the Society. He shall perform such other duties as may be directed by the House of Delegates or by the Board of Trustees.

In the event of a vacancy in the office of the secretary-treasurer, the Board of Trustees shall fill the vacancy until the next annual election.

CHAPTER VI. THE BOARD OF TRUSTEES

Section 1. *Composition.* The Board of Trustees shall consist of sixteen trustees elected by the House of Delegates, [six shall be chosen from district number three, and one from each of the other ten districts, (see map attached), these districts of the geographical area as of May, 1946], and one trustee-at-large (the retiring president, who shall serve a term of one year), the president, the president-elect and secretary-treasurer.

The vice presidents, the speaker and vice speaker shall attend the meetings, (including executive sessions) with the right of discussion, but without the right to vote.

Section 2. The duties of the Board of Trustees are executive, custodial and judicial.

(a) *Executive Duties.* The Board of Trustees shall implement all mandates from the House of Delegates except in matters of property or finance when it shall have sole authority.

The Board of Trustees may request a report from any committee in the interim between meetings of the House of Delegates.

(b) *Custodial Duties.* The Board of Trustees shall have charge and control of all property of whatsoever nature belonging to the Society, and of all funds from whatsoever source belonging to the Society.

No person shall expend or use for any purpose money belonging to the Society without the approval of the Board of Trustees.

All money received by the Board of Trustees and its agents, resulting from the duties assigned them, shall be paid into the treasury of the Society, and all orders on the treasury for disbursements of money shall be approved by the Board.

The Board of Trustees shall formulate rules governing the expenditure of money to meet the necessary running expenses and fixed charges of the Society.

All acts of the House of Delegates involving the expenditure, appropriation or use in any manner of money, or the acquisition or disposal in any manner of property of any kind belonging to the Society, must be approved by the Board of Trustees before same shall become effective.

Funds may be appropriated to encourage scientific investigation, medical education or any other purpose deemed proper and approved by the Board of Trustees.

(c) *Judicial Duties.* The Board of Trustees shall be the board of censors of the Society. It shall have jurisdiction over all questions of ethics and in the interpretation of the laws of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to component societies, or to this Society.

All questions of an ethical nature before the House of Delegates or the general scientific meetings, shall be referred to the Board of Trustees without discussion. The Board shall hear and decide all questions of procedure affecting the conduct of members on which an appeal is taken from the decision of a component society.

The decision of the Board of Trustees shall be final except that an appeal may be taken by a member charged with misconduct as provided for in the Constitution and Bylaws of the American Medical Association.

Section 3. *Executive Administrator.* The Board of Trustees shall employ an executive administrator whose duties shall be determined by the Board. He shall be responsible to the chairman of the Board. The Board shall review at each of its meetings the interim activities of the administrator. The Board shall also employ such other people as are needed for the conduct of the affairs of the Society.

Section 4. *Meetings.* The Board of Trustees shall meet daily during the annual convention of the Society, and at such other times as necessity may require, subject to the call of the chairman, or on the petition of the majority of the Trustees.

Section 5. *Organization.*

I. *Chairman.* The Board of Trustees shall meet on the last day of the annual convention and elect from among its members a chairman. He shall hold office for one year and may succeed himself for one additional year.

II. *Duties of the Chairman.* The chairman of the Board of Trustees shall prepare an agenda and shall preside at all meetings of the Board. He shall make an annual report to the House of Delegates. He shall be chairman of the Executive Committee. He shall present the report of the actions of the Executive Committee to the Board.

III. *Committees.* The Board shall form the following committees within itself:
   A. Executive Committee.
   B. Finance Committee.
   C. Policy Committee.
   D. Such other committees as are deemed necessary.

IV. *Duties of the Committees.*
   A. *Executive Committee.* The Executive Committee shall consist of the president, the president-elect, the chairman of the Board, the chairman of the Finance Committee, the chairman of the Policy Committee, the secretary-treasurer and the trustee-at-large.

      It may be given authority to act by the Board of Trustees.

      In matters of routine administration, special plans, policy, endorsement or expenditure it shall report to and request approval of the Board. It shall receive the reports of the Finance and Policy Committees and make recommendations concerning them to the Board. It shall furnish a report of its actions to the Board at each meeting.

   B. *Finance Committee.* The Finance Committee shall consist of the secretary-treasurer of the Society and three members of the Board appointed by the chairman. It shall develop for approval of the Board through the Executive Committee, a budget for the fiscal year. It shall supervise the financial transactions of the Society. It shall make recommendations to the Board for the control and investment of the funds of the Illinois State Medical Society.

   C. *Policy Committee.* The Policy Committee shall consist of three members of the Board appointed by the chairman. It shall continually review past and current proceedings of the House of Delegates to determine the established policies of the Illinois State Medical Society.

Section 6. *Quorum.* Ten members of the Board of Trustees shall constitute a quorum for the transaction of business.

Section 7. *County Societies.* The Board of Trustees shall have authority to organize the physicians of two or more counties into societies to be suitably designated, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Section 8. *Publications.* The Board of Trustees shall provide and superintend the publication and the distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary.

Section 9. *Bonding.* The Board of Trustees shall provide at the expense of the Society, adequate bond for those officers and employees of the Society it considers require bonding.

Section 10. *Duties of Trustees.* Each trustee shall be the organizer, consultant, advisor, administrator and speaker for the members of his district, and represent the Society as well as the members of his district at the Board meetings.

Each trustee should visit the societies in his district at least once a year. He shall make an annual report of his work and the condition of the profession in each society in his district to the Board of Trustees and to the House of Delegates.

Where his district is composed of more than one county, the trustee shall be an ex-officio member of the district Ethical Relations Committee, Grievance Committee, and Prepayment Plans and Organizations Committee. He shall report to the Board of Trustees the actions of

the component societies on reports of these committees.

The necessary traveling expenses incurred by such trustee in the line of the duties herein imposed, may be allowed by the Board of Trustees upon presentation of a properly itemized statement.

Section 11. *Vacancies.* If during the interval between two annual conventions, sickness, death, or removal from the state or district, or any other reason prevents a trustee from attending the duties of his district, or if he shall be absent from two consecutive meetings of the Board, his office may be declared vacant at the discretion of the Board. The Board shall have the authority to fill the vacancy for the period between the date at which the office was declared vacant and the next annual meeting of the House of Delegates.

Section 12. *The Benevolence Fund.* Each year the Board shall appropriate from the funds of this Society such sum or sums as it may deem proper to be held in a fund to be known as "The Benevolence Fund." This fund is established and shall be used only for the assistance or relief of needy members of this Society, their widows, widowers, or minor children. The assets shall be held in the treasury of this Society in a separate fund. Donations or requests to the Benevolence Fund automatically become a part of these assets.

Section 13. *Audit and Financial Statement.* The Board of Trustees shall employ annually a certified public accountant to audit all accounts of the Society, and present a statement of same in its annual report to the House of Delegates.

This report shall also specify the character and cost of all publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary.

CHAPTER VII. DISTRICT COMMITTEES

Each trustee district which is composed of more than one county, shall have an Ethical Relations Committee, a Grievance Committee, a Committee on Prepayment Plans and Organizations, and such other committees as required to provide to each component society, those services the component society may not be able to provide for itself. District committees shall function only at the request of a component society within the district.

Reports of findings and recommendations of these district committees shall be made to the component society which requested action.

The district trustee shall include a summary of the activities of each of these committees and the findings in general, in his annual report to the House of Delegates.

The committee members shall be elected, subject to the general rules on composition of committees contained in sub-paragraph II, Section 4, Chapter IX of these Bylaws, at a meeting of the delegates of the district called by the trustee of the district, before or during the annual convention of the Illinois State Medical Society. Chairmen of the committees shall be designated by the trustee of the district, and the trustee shall be an ex-officio member of each committee.

CHAPTER VIII. DUES AND EXPENSES

Section 1. *Annual Dues.* Funds shall be raised by an equal per capita assessment on each component society. The amount of the dues shall be fixed by the House of Delegates and shall include the dues and/or assessments approved by the House of Delegates of the American Medical Association.

These annual dues shall include the annual subscription to the Illinois Medical Journal which shall be at least fifty per cent of the regular subscription price of the Journal.

Section 2. Teaching, research and administrative members in the full time employment of any of the approved medical schools in Illinois, shall pay dues at a 50% rate upon nomination by the dean of the medical school and upon recommendation of the component society.

The Board of Trustees shall also be authorized to give similar consideration on an individual basis to members engaged in full time teaching or research in a not-for-profit institution upon recommendation of the component society. The Board shall recommend similar consideration by the American Medical Association.

Section 3. Physicians in the private practice of medicine may be given a 50% reduction in dues during the first year of practice upon recommendation of their component society.

Section 4. Physicians approved for membership after June 30 shall pay one-half of the annual dues for that year.

Section 5. The Board of Trustees may authorize the remission of dues of any member on recommendation of his component society for good reason. In such cases the secretary shall recommend remission of dues by the American Medical Association.

CHAPTER IX. COMMITTEES

Section 1. *Standing Committees.* The Standing Committees shall be:

A. Elected by the House of Delegates:
   - A Committee on Medical Education
   - A Grievance Committee
   - A Committee on Prepayment Plans and Organizations
   - A Committee on Disaster Medical Care
   - A Committee on Laboratory Evaluation
   - A Committee on Occupational Health
   - A Committee on Public Safety

B. Appointed by the Board of Trustees:
   - A Committee on Scientific Assembly

A Medical Legal Committee
A Committee on Impartial Medical Testimony
A Committee on Legislation
A Committee on Public Relations
A Committee on Medical Benevolence
A Committee on Archives
A Committee on Constitution and Bylaws

Section 2. *Ad Hoc Committees.* The president or the Board of Trustees, each independently or at the discretion of the House of Delegates, or the House of Delegates independently, may appoint to accomplish specific tasks, committees which shall continue until the purpose for which they were appointed is accomplished, or until discharged by the appointing authority.

Section 3. *Other Committees.* Such other committees as shall be required to further the purposes for which the Illinois State Medical Society was founded, to implement directives and policies of the House of Delegates, or to act in liaison with other agencies, may be appointed by the president or the chairman of the Board of Trustees to serve for the duration of the term of office of the appointing authority.

Section 4. *Composition.*

I. Committees shall consist of at least three and not more than nine members.

II. Members of standing committees shall serve for a term of three years except that
   (1) when a vacancy occurs for any reason, it shall be filled for the unexpired term only, and
   (2) when a committee is originally constituted, terms of committee members shall be staggered so that approximately one third of the terms shall expire each year.

III. The chairman of standing committees elected by the House of Delegates shall be appointed annually by the president from the committee members. The chairmen of standing committees from the Board of Trustees shall be appointed annually by the chairman of the Board from the committee members.

IV. No member may serve on any committee for more than three consecutive terms or nine consecutive years.

Section 5. *Organization.* The power is vested in the authority electing or appointing a committee
1) to create, organize and implement that committee;
2) to enlarge it, or
3) to abolish it without consideration of the unexpired terms of any of its members.

Section 6. *Vacancies.* Vacancies occurring for any reason in the membership of any committee may be filled for the unexpired term by appointment by the chairman of the Board of Trustees with the approval of the Board.

Section 7. *Ex-officio Members.* The president of the Society, chairman of the Board of Trustees and the secretary-treasurer of the Society shall be ex-officio members without the right to vote, of all committees.

Section 8. *Reports.* Annual reports shall be submitted to the House of Delegates by all committees.

Any committee shall report to the Board of Trustees when requested by the Board to do so.

Section 9. *Committee on Medical Education.* The Committee on Medical Education shall consist of five members to be elected by the House of Delegates.

This committee shall
1) maintain a continuing interest in the recruitment of students, in the curricula of the medical schools and in postgraduate in-hospital training programs;
2) carry to the deans of the medical schools recommendations from the viewpoint of of the practicing physician;
3) encourage and implement the AMA-ERF program in Illinois;
4) study, evaluate and criticize the postgraduate programs of the Illinois State Medical Society and other organizations, and
5) be available to advise and cooperate with the Department of Registration and Education of the State of Illinois.

Section 10. *Grievance Committee.* The Grievance Committee shall consist of six members elected by the House of Delegates.

Each component society should elect or appoint a grievance committee. If a county does not have a grievance committee, the district grievance committee shall function in its stead. The county or district grievance committee shall investigate complaints, and resolve differences arising from the rendering of professional services by members of the Society to the public.

Where the county or district grievance committee finds that factors in any case warrant, it shall recommend to the county medical society that charges of unethical conduct be preferred against the offending member of the Society. Failure to appear on order of the committee may be interpreted as grounds for a citation of unprofessional conduct.

It shall be the function of the State Society Grievance Committee
1) to cooperate with grievance committees of component societies and districts in an effort to resolve differences between members of the Society and the public;
2) to review the actions and decisions of county and district grievance committees when a party to a grievance complaint appeals from the decision of the local committee. Appeal to this commit-

tee is the privilege of such parties and they shall be so notified at the time of the hearing of the original complaint, and

3) to conduct a continuing study of the complaints against the medical profession of the State of Illinois and to make recommendations to improve the quality of medical care.

To accomplish these purposes, the State Grievance Committee shall require that county medical societies furnish an annual report of their grievance committee activities including specifically

a) the number of complaints
b) a classification of the complaints
c) the date of each complaint, and
d) the date and nature of its settlement.

The Grievance Committee shall tabulate and analyze this material in its annual report to the House of Delegates.

Section 11. *Committee on Prepayment Plans and Organizations.* The Committee on Prepayment Plans and Organizations shall consist of five members elected by the House of Delegates.

It shall review and adjust differences between members of the Society and prepayment plans and/or insurance organizations (including federal and state governmental programs), except those otherwise served by special advisory committees. In disputes brought by third parties against physicians, the committee shall act only upon referral or appeal from county or district committees.

The committee shall encourage county medical societies to establish appropriate committees to which third party grievances may be brought and to notify third party plan administrators of the existence of such local committees.

The committee may

1) recommend procedures for conducting hearings by county or district committees, and
2) develop guides consistent with the policy of the House of Delegates for county medical societies in their dealings with third party plans which pay "usual and customary fees."

In any dispute over fees between a physician and any third party plan involving a fee or benefit schedule negotiated by the Illinois State Medical Society, the committee may act in review at the member's request without referral from the county or district committee.

The committee shall consider

1) all problems bearing on the relationship between physicians and prepayment plans or health insurance carriers;
2) methods for increasing the effectiveness of existing prepayment and insurance plans;
3) proposals for the financing of medical care for all segments of the population, and
4) problems encountered by physicians in supplying services under the various certificates and policies, or in the reporting of claims.

After being notified of the decision of the committee, a member of the Society shall have 30 days to appeal for a rehearing before the committee. If after careful investigation, the Committee on Prepayment Plans and Organizations finds that the complaint cannot be adjudicated amicably, the committee shall report the matter to the county society. If factors in the case warrant it, the committee may recommend that charges of unethical conduct be preferred against the offending member or that agreements with plans and organizations be re-evaluated.

Failure to appear on order of the committee may be grounds for citation of unprofessional conduct to the county society.

Section 12. *Committee on Disaster Medical Care.* The Committee on Disaster Medical Care shall consist of five members elected by the House of Delegates.

The committee shall:

1) be responsible for assisting in the education of the profession and the public on the development and implementation of programs to provide medical care in the event of disaster;
2) be responsible for directing the Society's efforts toward preparedness in the event of natural or man-made catastrophes;
3) co-operate with civil defense agencies, public health departments, hospitals, management and labor organizations, paramedical groups and other agencies to establish unity and co-ordination, and
4) serve in an advisory capacity to county medical societies in medical self-help training programs and hospital disaster planning.

Section 13. *Committee on Laboratory Evaluation.* The Committee on Laboratory Evaluation shall consist of five members elected by the House of Delegates.

The committee shall:

1) effect methods of elevating and maintaining the standards of medical laboratories in Illinois;
2) encourage the use of medical diagnostic laboratories supervised by duly qualified physicians, and
3) encourage each county and district to establish evaluation committees.

Section 14. *Committee on Occupational Health.* The Committee on Occupational Health shall consist of five members elected by the House of Delegates.

The committee shall:

1) be concerned with diseases and problems associated with occupational and industrial health;
2) co-operate with the Council on Occupational Health of the American Medical Association, Industrial Medical Association and similar state agencies, and
3) recommend to the State of Illinois Workman's Compensation Board medical procedures designed to assist the Board in the evaluation of claims.

Section 15. *Committee on Public Safety.* The Committee on Public Safety shall consist of five members elected by the House of Delegates.

The Committee shall:

1) study the medical aspects of accident prevention;
2) alert the public to seasonal health hazards, and
3) co-operate with the Illinois Department of Public Health, the National Safety Council and similar organizations.

Section 16. *Committee on Scientific Assembly.* The Committee on Scientific Assembly shall consist of nine members appointed by the Board of Trustees.

This committee

1) shall coordinate the programs for the general assemblies, the section meetings and the scientific exhibits at the annual convention;
2) shall appoint, with the approval of the Board, a secret committee to make awards to the scientific exhibitors;
3) may incorporate in the annual scientific meetings those meetings of medical specialty groups which wish to affiliate with the Illinois State Medical Society annual convention, and
4) shall arrange for the annual banquet and other social functions held during the annual convention.

Section 17. *Medical Legal Committee.* The Medical Legal Committee shall consist of five members appointed by the Board of Trustees.

It shall

1) educate the members of the medical profession in medico-legal affairs, and
2) co-operate with the American Medical Association in its program in the same fields.

It shall evaluate medical testimony given by physicians in the courts of Illinois. When questions on the validity of testimony arise, it shall have the authority

1) to examine any member of the Illinois State Medical Society who is either suspected of or has been accused of giving improper testimony in any court proceedings
2) to procure and examine transcripts of court testimony to determine whether or not fraudulent testimony has been given, and
3) to report its findings to the Board of Trustees.

Where irregularities are found, the Board of Trustees may submit the findings to the Ethical Relations Committee of the county medical society for action.

It shall appoint a sub-committee to act in liaison with members of a similar committee of the Illinois Bar Association in matters involving both professions.

Section 18. *Impartial Medical Testimony Committee.* The Impartial Medical Testimony Committee shall consist of nine members appointed by the Board of Trustees.

It shall co-operate with the judiciary in both federal and state courts within the State of Illinois.

It shall, when requested by the court, implement the Impartial Medical Testimony Rule.

Section 19. *Committee on Legislation.* The Committee on Legislation shall consist of five members appointed by the Board of Trustees.

The Committee on Legislation shall represent and direct legislative activities of the Illinois State Medical Society in accordance with policies of the House of Delegates and at the direction of the Board of Trustees.

Committees and representatives of the Society which may be concerned with legislation shall, between meetings of the House of Delegates, channel their recommendations to the Board of Trustees for referral to the Committee on Legislation.

This committee shall

1) inform the membership through approved media of all legislative matters of interest to the medical profession in the State of Illinois;
2) maintain surveillance of all bills introduced in the state legislature which have direct or indirect effect upon the practice of medicine or the state of health of the citizens of Illinois;
3) maintain effective liaison with the American Medical Association Council on Legislative Activities and the American Medical Association Washington Office, so that members of the Illinois State Medical Society will be fully informed and can act vigorously on matters of federal legislation, and
4) recommend to the Board of Trustees a legislative program for promulgation among the members of the Society.

A report of its activities shall be submitted currently to the Board of Trustees and annually to the House of Delegates.

Section 20. *Committee on Public Relations.* The Committee on Public Relations shall consist of five members appointed by the Board of Trustees.

It shall plan and execute programs designed to enhance the relationship between the public and the medical profession. It shall request the Board of Trustees to appoint sub-committees to accomplish specific purposes.

Section 21. *Committee on Medical Benevolence.* The Committee on Medical Benevolence shall consist of three members appointed by the Board of Trustees.

It shall

1) examine applications to the Society for assistance to determine eligibilty for benefits;
2) keep the names of the beneficiaries confidential and known only to the committee, and
3) recommend to the Finance Committee of the Board of Trustees the allotment for each recipient.

If funds available become inadequate to meet disbursement, the Finance Committee of the Board of Trustees shall be requested to appropriate sufficient funds to support the program until the next budget appropriation.

Section 22. *An Archives Committee.* The Archives Committee shall consist of three members appointed by the Board of Trustees.

It shall

1) assist in the collection and evaluation of medical items and records of historical interest to the Society and the public;
2) cooperate with other associations and agencies to preserve and display such material;
3) supervise the preparation of any written records of the Society or any of its activities, and
4) inform the Board of Trustees of those special anniversaries which should be commemorated and shall supervise the observance of these occasions.

It shall appoint a sub-committee on the Museum of Medical History which shall

1) be responsible for the establishment of a Museum of Medical Progress in the State of Illinois;
2) cooperate with the historical museum of the State of Illinois and various other historical societies, and
3) educate the public in the contributions made by physicians of Illinois to preventive medicine and the care and treatment of patients.

Section 23. *Constitution and Bylaws.* The Constitution and Bylaws Committee shall consist of five members appointed by the Board of Trustees.

It shall

1) receive from individual members, county societies, committees, the Board of Trustees and the House of Delegates, all suggestions and proposals for the modification of the Constitution and/or Bylaws;
2) prepare for the consideration of the House of Delegates all changes in the Constitution or Bylaws, and
3) maintain constant surveillance of both documents to keep them current, effective and consistent with policies of the House of Delegates.

CHAPTER X. REFERENCE COMMITTEES

Section 1. *Appointment.* Immediately after the organization of the House of Delegates at each annual or special meeting, the speaker shall announce the appointment from among the members of the House, such committees as may be deemed expedient by the House of Delegates.

Each committee shall consist of five or more members unless otherwise provided, the chairman to be announced by the speaker. These committees shall serve during the meeting at which they are appointed.

Section 2. *Duties of Reference Committees.* References, resolutions, measures and propositions presented to the House of Delegates shall be referred to the appropriate committee, which shall report to the House of Delegates before final action shall be taken. A two-thirds affirmative vote of the House of Delegates shall be required to suspend this rule.

Section 3. *Organization.* Each reference committee shall, as soon as possible after the adjournment of each session, or during the session if necessary, take up and consider such business as may have been referred to it, and shall report on same at the next session, or when called upon to do so.

Section 4. *Reference Committees.* The following committees are hereby provided for:

A Committee on Credentials
A Committee on Rules and Order of Business
Tellers and Sergeants-at-Arms
A Committee on Changes in the Constitution & Bylaws
A Committee on Administrative Activities
A Committee on Economic Activities
A Committee on Scientific Activities
A Committee on Public Relations Activities
A Committee on Legislative Activities
A Committee on Miscellaneous Business

Section 5. *The Committee on Credentials* shall consider all questions regarding the registration and the credentials of the delegates. It shall pass out and receive the attendance slips for each session of the House of Delegates, and perform any other duties assigned.

Section 6. *Committee on Rules and Order of Business* shall consider all matters regarding rules governing action, method of procedure and order of business for the House of Delegates.

Section 7. *The Tellers and Sergeants-at-Arms* shall serve the speaker of the House of Delegates whenever the situation arises which requires a ballot vote or executive session of the House of Delegates.

Section 8. *The Committee on Changes in Constitution and Bylaws* shall consider all proposed amendments to the Constitution and Bylaws.

The chairman of the Committee on Constitution and Bylaws, or his representative, shall serve in an advisory capacity to this reference committee and shall attend all sessions, including the executive sessions of the reference committee, to assist in the preparation of the report of the committee of the House of Delegates.

Section 9. *The Committee on Administrative Activities* shall consider the annual reports of the officers, trustees, the executive administrator and such other reports as pertain to the administrative activities of the Society.

Section 10. *The Committee on Economic Activities* shall consider the annual reports of those individuals and committees concerned with the socio-economic field of medicine as assigned to that Division of the Society.

Section 11. *The Committee on Scientific Activities* shall consider the annual reports of the individuals and committees concerned with the editing and publishing of the Illinois Medical Journal, and also the various scientific activities as assigned to that Division of the Society.

Section 12. *The Committee on Public Relations Activities* shall consider the annual reports of those individuals and committees concerned with public relations, and assigned to that Division of the Society.

Section 13. *Committee on Legislative Activities* shall consider the annual reports of the individuals and committees concerned with legislative and legal aspects as assigned to that Division of the Society.

Section 14. *Committee on Miscellaneous Business* shall consider all other business not allocated to any of the enumerated committees, and any new business to come before the House of Delegates not otherwise provided for.

CHAPTER XI. COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Society, or those which may hereafter be organized in this state, which have adopted principles of organization in harmony with this Constitution and Bylaws, shall upon application to and approval by the Board of Trustees, receive a charter from and thereby become a component part of this Society, and members thereof shall become members of this Society and the American Medical Association.

Section 2. Charters shall be issued only on approval of the Board, and shall be signed by the president and the secretary of this Society.

The Board shall have authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and Bylaws.

Section 3. Only one component medical society shall be chartered in any county.

Section 4. Every registered physician holding the title of Doctor of Medicine or its equivalent, who resides in the jurisdiction of a component society, and who is of good moral character and professional standing, shall be eligible to membership in that component society.

The component county society shall be the sole judge of the qualifications of its members, subject only to the stipulations contained in the Constitution and Bylaws.

Section 5. Any physician who has been disciplined by any action of a component society and believes he has not had a fair trial, shall have the right of appeal to the Board of Trustees.

Section 6. When a member in good standing in a component society changes his residence to another county in this state, such change of residence shall terminate his membership in such component society. (This ruling shall not apply to members in military service or in the service of the State or the United States government).

Such member shall be entitled, upon his request, to a statement from his former secretary as to his standing. This statement of standing shall be issued without cost to the applicant.

He shall present this statement to the component society of the county to which he removes and it shall accompany his application for membership. The board of censors of the society receiving this application shall give this statement of prior standing due consideration before accepting or rejecting his application for membership.

Section 7. A physician living on or near a county line, or practicing partly or totally in an adjacent county, may hold his membership in the county most convenient for him, provided he submits written authorization to that society from the component society in whose jurisdiction he resides.

Section 8. The secretary of each component society shall keep a roster of its members, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary. In keeping such a roster the secretary shall note any changes in the personnel of the profession by death or by removal to or from the county. When requested, he shall furnish on blanks supplied him for the

purpose, an official report containing such information for the secretary of this Society and likewise for the trustee of the district in which his county is situated.

Section 9. The secretary of each component society shall forward its roster of officers and members, and a list of delegates and alternate delegates to the secretary of this Society before the first of February each year.

Section 10. Any component society which fails to pay its assessment or make the annual report required on or before April fifteenth shall be held as suspended and none of its members shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met.

A member is in good standing unless otherwise disqualified, whose dues are paid on or before the first day of April of the current year. Immediately after the first of April, each delinquent member shall be notified that in consequence of non-payment of dues, his membership is delinquent. If dues remain unpaid as of June thirtieth of the current year, membership shall be automatically dropped. The member may be reinstated by paying all delinquent dues, provided, in the interim, he has not been guilty of conduct prejudicial to membership; but if two or more years have elapsed since he was a member in good standing, he must in addition, make application as a new member.

Section 11. The Constitution and Bylaws of the Illinois State Medical Society and of the American Medical Association, together with the Principles of Medical Ethics of the American Medical Association, shall be binding upon the members of the component societies.

CHAPTER XII. DISCIPLINE

Section 1. *Ethical Relations Committee.* The Board of Trustees shall appoint from its members, an Ethical Relations Committee to review matters involving the interpretation of the Principles of Medical Ethics, violations of the Constitution and Bylaws of the Illinois State Medical Society or its component societies, and charges of misconduct of members of the Society.

It shall serve as an appellate body to review cases involving these matters referred by component medical societies, and shall consider only matters of procedure.

Section 2. Any member of a component society shall be subject to censure, suspension or expulsion by such component society when

A. He has been adjudged guilty by proper civil authorities of a criminal offense involving moral turpitude, or

B. He has been adjudged guilty by his component society in accordance with the procedural requirements of these bylaws of:
   1. A gross misconduct as a physician or surgeon, or
   2. Of a violation of the Constitution or Bylaws of his component society, or of the Illinois State Medical Society, or of the Principles of Medical Ethics promulgated from time to time by the American Medical Association.

Section 3. *Procedure.* Each component society may have, either by appointment or election, an Ethical Relations Committee whose duty it shall be to prosecute formal charges. In the event the county society does not have such a committee, the district Ethical Relations Committee shall function in its behalf.

Section 4. Original complaints received by the Illinois State Medical Society should be referred directly to the secretary of the component society of which the accused is a member and to the appropriate district Ethical Relations Committee.

Section 5. The following principles of justice shall guide all disciplinary actions:

1. An accused is presumed to be innocent until he has been proven guilty.
2. After charges have been preferred there shall be no evasion of the fact that the respondent is to be tried; that the Ethical Relations Committee before which he is cited to appear is a trial body, and that he will be on trial when he appears.
3. He must be notified by registered mail of the specific charges which are made against him at least ten days before the date set for his trial.
4. He may not be found guilty of anything not included in the charges preferred against him and presented to him.
5. All evidence not pertinent to the charge as made shall be considered irrelevant and immaterial. It shall be wholly disregarded in the decision.
6. Testimony not bearing on the charges shall be objected to, and if sustained by the trial body, stricken from the records.
7. The respondent shall be advised of his rights by the trial body, namely: (a) that he may be represented by any member of the Society as counsel; (b) that he or his counsel may cross examine witnesses; (c) that he may offer in evidence any records or documents that he deems fit; (d) that he may enter objections as to testimony or to material offered in evidence; (e) that he may address the trial body in his own behalf; (f) and that he has the right of appeal to the Board of Trustees of the Illinois State Medical Society.

Section 6. A comprehensive stenographic record of the proceedings must be kept for reference,

and shall be available until final adjudication has been made.

Section 7. This committee, sitting as a trial body, shall find the accused either guilty or not guilty. If the verdict is guilty, the trial body shall recommend censure, suspension or expulsion.

The findings of the trial body must be presented to the component county society for approval or rejection. The accused must be notified by registered mail at least ten days before the date set for the meeting at which this action will be taken.

If the findings of the trial body are against the accused the secretary of the component society shall acquaint the accused by registered mail with his right of appeal within thirty days to the Board of Trustees of the Illinois State Medical Society.

Section 8. Appeals received by the Board of Trustees shall be referred to the Ethical Relations Committee of the Board for review. The committee shall notify the accused and the secretary of the component society by registered mail at least ten days prior to the date set for the hearing of the appeal. The chairman of the committee shall preside over the hearing in accordance with rules established by the Board of Trustees.

Section 9. On conclusion of the hearing, the Ethical Relations Committee of the Board of Trustees shall meet in executive session to consider its decision, and shall report in writing to the Board at its next meeting for final action.

Section 10. In case of findings against the accused, the secretary of the Society shall notify the accused within ten days by registered mail of his right to appeal to the Judicial Council of the American Medical Association.

Section 11. The secretary of the Society shall notify the defendant and the secretary of the component society wherein the defendant held membership, of the action of the Board.

Section 12. In the event of a decision by the Board of Trustees of improper procedure of trial or findings, the case shall be remanded to the component society for reconsideration.

CHAPTER XIII. MISCELLANEOUS

Section 1. The fiscal year of this Society shall be from January first to December thirty-first inclusive.

Section 2. Robert's "Rules of Order, Revised," shall be the guide for all procedure when not in conflict with the Constitution and Bylaws.

CHAPTER XIV. AMENDMENTS

The House of Delegates may amend any article of these Bylaws by a two-thirds vote of the delegates present at any meeting, provided that such amendment shall not be acted upon before the day following that on which it was introduced.

ORDER OF BUSINESS OF THE HOUSE OF DELEGATES

First Session

(1) Call to order.
(2) Report of Committee on Credentials.
(3) Roll Call.
(4) Reading and approval of minutes of last meeting.
(5) Appointment of Reference Committees.
(6) Reports of Officers.
(7) Reports of the Trustees, the Editor, and the Historian.
(8) Reports of Standing Committees.
(9) Reports of Board Committees.
(10) Reports of Special Committees.
(11) Reading of Resolutions.
(12) Unfinished Business.
(13) New Business.
(14) Recess.

Last Session

(1) Call to Order.
(2) Report of Committee on Credentials.
(3) Roll Call.
(4) Election of Officers.
(5) Election of Trustees.
(6) Election of Delegates to the American Medical Association.
(7) Election of Alternate Delegates to the American Medical Association.
(8) Election of Standing Committees.
(9) Fixing per capita tax for ensuing year.
(10) Selection of meeting place for next annual meeting (Subject to the investigations of the Board.)
(11) Reports of Reference Committees.
(12) Unfinished Business.
(13) New Business.
(14) Induction of the President-Elect to the office of President.
(15) Adjournment.

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Illinois State Medical Society 1964-65 Officers

OFFICERS

President, Edward A. Piszczek, 6410 N. Leona Ave., Chicago
President-Elect, Burtis E. Montgomery, Harrisburg
1st Vice President, Carl F. Steinhoff, 720 N. Michigan Ave., Chicago
2nd Vice President, L. T. Fruin, 300 North St., Normal
Secretary-Treasurer, Jacob E. Reisch, 1129 S. 2nd St., Springfield

HOUSE OF DELEGATES

Speaker, E. W. Cannady, 4601 State St., East St. Louis
Vice Speaker, Maurice M. Hoeltgen, 1836 W. 87th St., Chicago

BOARD OF TRUSTEES — Term Expires

1st District—Carl E. Clark, Sycamore 1965
2nd District—Ralph N. Redmond, 101 E. Miller Rd., Sterling 1965
3rd District—Caesar Portes, 25 E. Washington St., Chicago 1965
Frank J. Jirka, 1507 Keystone Ave., River Forest 1965
Philip Thomsen, 13828 Lincoln Ave. Dolton 1966
J. Ernest Breed, 55 E. Washington St., Chicago 1966
William E. Adams, 950 E. 59th St., Chicago 1967
Ted LeBoy, 330 Gale Ave., River Forest .1967
4th District—Paul P. Youngberg, 1520 Seventh St., Moline 1967
5th District—Darrell H. Trumpe, St. John's Sanatorium, Springfield 1967
6th District—Newton DuPuy, 1101 Maine St., Quincy 1966
7th District—Arthur F. Goodyear, 142 E. Prairie Ave., Decatur 1967
8th District—Wm. H. Schowengerdt, 301 E. University Ave., Champaign 1967
9th District—Charles K. Wells, 117 N. 10th St., Mt. Vernon 1966
10th District—Willard C. Scrivner, 4601 State St., East St. Louis 1966
11th District—Bernard Klein, 4 E. Clinton St., Joliet 1965

TRUSTEE-AT-LARGE, Harlan English, 909 N. Logan Ave., Danville

CHAIRMAN OF THE BOARD: William E. Adams, 950 E. 59th St., Chicago

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House of Delegates

DOWNSTATE DELEGATES AND ALTERNATES

ADAMS		CLARK	
Richard Cooper	Harold Swanberg	E. P. Johnson	Geo. T. Mitchell
ALEXANDER		CLAY	
A. L. Robinson		William T. Kamp	John R. Morray
BOND		CLINTON	
Boyd E. McCracken	Max Fraenkel	W. L. DuComb	J. Roger Sosa
BOONE		COLES-CUMBERLAND	
John H. Steinkamp	M. Paul Dommers	Joseph R. Mallory	Mack W. Hollowell
BUREAU		CRAWFORD	
K. M. Nelson	G. E. Giffin	John W. Long	Raymond B. Murphy
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CHAMPAIGN		DOUGLAS	
Carl Greenstein	H. J. Kolb	Harry Messmore	Myron Boylson
C. H. Walton	R. E. Schaede	DUPAGE	
CHRISTIAN		I. E. Bartlett	James P. Campbell
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	J. P. Schweitzer	B. L. Rodkinson	
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	James H. Acklin		
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	William S. Vanbergen	James R. Gartner	
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	Stanley W. Moore	Hans Rollinger	
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	Paul W. Sunderland	Ross N. Hutchison	
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	John P. Pope	Harry L. Lewis	
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	Keith H. Frankhauser	P. D. Reinertsen	
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	Joseph Bryant	W. F. Stanelle	
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	Paul A. Dailey	A. K. Baldwin	
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	C. Wm. Bruehsel	Byron J. Mueller	
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	Elmer T. Swann	Harold Bock	
HENRY			
	Paul M. Schmidt	William D. Larson	
IROQUOIS			
	R. Kent Swedlund	James Dailey	
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	J. A. Petrazio	Martin H. Powell, Jr.	
JASPER			
	Don L. Hartrich	C. O. Absher	
JEFFERSON-HAMILTON			
	Charles K. Wells	Herman Rogers	
JERSEY			
	W. Clark Doak	Clyde L. Wieland	
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	J. Eric Gustafson	A. L. Hildinger	
JOHNSON			
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	John A. Newkirk	H. W. Bruskewitz	
	Wayne N. Leimbach	John M. Abell	
	B. F. Shirer	J. L. Bordenave	
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	Donald A. Meier	John C. Burnett	
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	Michael R. Saxon	Ray Crawford	
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	William A. McNichols	Charles H. LeSage	
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	Lucian A. Mosciski	George T. Crout	
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	Charles R. Bardwell	Wayne J. Schall	
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	V. B. Adams	Donald Dexter	
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	L. T. Fruin	A. Edward Livingston	
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	Maurice D. Murfin	Hyman J. Burstein	
	C. Elliott Bell	C. F. Downing	
MACOUPIN			
	Joseph J. Grandone	Roger Quinn	
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	Eugene F. Moore	Julius Katz	
	Edward K. DuVivier	Mather Pfeiffenberger	
MARION			
	Karl Venters		
MASON			
	J. W. McHarry	H. W. Maxfield	
MASSAC			
	George Green	Virgil O. Decker	
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	H. K. Moulton	Stanley Paulauskis	
MERCER			
	M. E. Conway	John E. Bohan	
MONROE			
	Otto L. Kremer	Hans A. Reichel	
MONTGOMERY			
	George A. Telfer	James D. Telfer	
MORGAN			
	Robert R. Hartman	Thomas W. Auner	
MOULTRIE			
	Eugene J. Boros		
OGLE			
	Russel W. Zack	Arthur R. Bogue	
PEORIA			
	William O. McQuiston	William F. Chambers	
	Norman Powers	S. M. Scalzo	
	Frank A. Christensen	George J. Best	
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	C. E. Cawvey	James B. Stotlar	
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	Edgar Weir	George G. Green	
PIKE-CALHOUN			
	James H. Rutledge	James E. Goodman	
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	James G. Conger	A. L. Robinson	
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	Rob't E. Schettler	O. W. Pflasterer	
RICHLAND			
	Wm. A. Moore	Wayne Moulton	
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	C. S. Costigan	Paul Moen	
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	V. P. Siegel	Harold McCann	
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	N. A. Thompson	D. A. Lehman	

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A. R. Eveloff	
SCHUYLER	
Henry C. Zingher	
SHELBY	
H. H. Pettry	Duncan Biddlecombe
STEPHENSON	
Thomas A. Haymond	H. R. Osheroff
TAZEWELL	
Lawrence J. Rossi	Roger Neumann
UNION	
William H. Whiting	John Pfau
VERMILION	
G. L. Seitzinger	D. D. Spicer
WABASH	
Roger Fuller	Don Risley
WARREN	
Kenneth E. Ambrose	Russell M. Jensen
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Walter P. Plassman	William P. Lesko
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C. J. Jannings	A. R. Marks
WHITE	
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WHITESIDE	
C. J. Mueller	Isaac Vandermyde
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Leonard F. Roblee	Robert J. Becker
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F. A. Munsey	Harry E. LaPlante
WOODFORD	
Robert Lykkebak	Joe C. Phifer

CHICAGO MEDICAL SOCIETY DELEGATES

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John S. Hyde	Robert F. Sharer
C. Otis Smith	Everett E. Nicholas
Herbert Ratner	James B. Hartney
Charles J. Weigel	Michael J. Parenti
Arthur E. Joslyn, Sr.	A. Everett Joslyn, Jr.
John Boyd	R. Kowal
Joseph C. Sodaro	William F. Ashley
Clair M. Carey	Craig D. Butler
CALUMET BRANCH	
Paul Blackburn	E. L. Falloon
Norman C. Meyer	Roland C. Olsson
DOUGLAS PARK BRANCH	
Russell Barrett	E. M. Christensen
L. S. Tichy	Rudolph G. Mrazek, Jr.
Otto Koluvek	Theodore Dakin
John D. McCarthy	Colman J. O'Neill
Raymond Nemecek	G. R. Demage
ENGLEWOOD BRANCH	
A. J. Sullivan	James Griffin
Edward J. Krol	John E. Meyer
Francis W. Young	Joseph A. Patka
Frank Kwinn	Alfred C. Wendt, Jr.
William Nainis	George J. Rukstinat
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Edson F. Fowler	Arnold Wagner
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Noel G. Shaw	Frank Pirruccello
Raymond H. Conley	Jerome T. Paul
*Luella Nadelhoffer	Robert A. Snyder
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Wright R. Adams	Chester Guy
Frank F. Maple	Julius Ginsberg
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O. W. Rest	Daniel Pachman
Charles McCartney	H. Herbolsheimer
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Chester L. Crean	Willis Diffenbaugh
Philip R. McGuire	Robert Jensik
Edward C. Helfers	Eugene J. Ranke
W. B. Stromberg, Sr.	Hugh Worsley
Karl L. Vehe	Warren A. Clohisy
Joseph R. DeCaro	Harry Carter
W. O. Ackley	Philip M. Bedessem
George H. Irwin	T. A. Davis
Burton Soboroff	Herschel Browns
C. A. Norberg	Joseph Skom
NORTH SIDE BRANCH	
Vincent Freda	Hiram Langston
Jack Williams	B. F. Lounsbury
James H. Cross	G. L. Kaufmann
Clifton L. Reeder	Leander W. Riba
Michael Boley	Coye C. Mason
Roland R. Cross	R. Gilchrist
S. L. Andelman	Samuel A. Levinson
William Hutchison	Bernard Peele
Anton Pantone	Marvin Rosner
NORTHWEST BRANCH	
N. J. Kupferberg	Louis A. Wajay
M. J. Kutza	M. A. Rydelski

*Deceased

A. J. Linowiecki
F. M. Nicholson
Peter N. Furno
S. M. Goldberger
James McDonnough
L. S. Sluzynski
R. V. Kochanski
Alfred A. Zanette

South Chicago Branch
Tibor Czeisler
M. E. Finsky
Simon J. Saltman
Arthur W. Fleming
Morris Friedell
John M. Coleman
John J. Marlow
Albert L. Pisani

South Side Branch
Quentin Young
Robert R. Mustell
Jacob Epstein
Maurice Gleason

Southern Cook County Branch
Kenneth Smith
Frederick Weiss
John B. Koenig
Marvin Morrison

Cyril Gallati
Gerald Gnade

Stock Yards Branch
E. J. Lukaszewski
Glenn A. Burckart
Joseph M. Ruda
Frank J. Nowak

West Side Branch
George Kaiser
Anna Marcus
Joseph F. O'Malley
George Rezek
Eugene T. Hoban
Lawrence Ryan
Louis S. Varzino
John Gregorio

At-Large
T. R. Van Dellen
Morris Fishbein
Casper Epsteen
Allison L. Burdick, Sr.
Harold A. Sofield

Delegates and Alternates to A.M.A.

(To take office Jan. 1, 1963—
Term expires Dec. 31, 1964)
Elected on May 17, 1962
Italics Indicate Alternate Delegates

Maurice M. Hoeltgen, 1836 W. 87th St., Chicago
H. Close Hesseltine, 5841 S. Maryland Ave., Chicago
Leo P. A. Sweeney, 10725 S. Western Ave., Chicago
Raleigh C. Oldfield, 715 Lake St., Oak Park
Carl F. Steinhoff, 720 N. Michigan Ave., Chicago
Arkell M. Vaughn, 2015 E. 79th St., Chicago
William K. Ford, 303 N. Main St., Rockford
Paul A. Dailey, Carrollton
Burtis E. Montgomery, Harrisburg
Fred C. Endres, 4069A Prospect Rd., Peoria Hts.

(To take office Jan. 1, 1964—
Term expires Dec. 31, 1965)
Elected on May 16, 1963

H. Kenneth Scatliff, 4753 Broadway, Chicago
George F. Lull, 400 E. Randolph St., Chicago
Walter C. Bornemeier, 4665 Peterson Ave., Chicago
George C. Turner, 670 N. Michigan Ave., Chicago
Frank H. Fowler, 6356 Diversey Ave., Chicago
Edward A. Piszczek, 6410 N. Leona Ave., Chicago
Arthur F. Goodyear, 142 E. Prairie St., Decatur
Newton DuPuy, 1101 Maine St., Quincy
Harlan English, 909 N. Logan Ave., Danville
Jacob E. Reisch, 1129 S. 2nd St., Springfield
E. W. Cannady, 4601 State St., East St. Louis
Carl E. Clark, Sycamore

(To take office Jan. 1, 1965—
Term expires Dec. 31, 1966)
Elected on May 21, 1964

Maurice M. Hoeltgen, 1836 W. 87th St., Chicago
Theodore R. VanDellen, 435 N. Michigan Ave., Chicago
Leo P. A. Sweeney, 10725 S. Western Ave., Chicago
Allison L. Burdick, Sr., 5906 W. North Ave., Chicago
H. Close Hesseltine, 5841 S. Maryland Ave., Chicago
Arkell M. Vaughn, 2015 E. 79th St., Chicago
William K. Ford, 303 N. Main St., Rockford
Paul A. Dailey, 620 N. Main St., Carrollton
Burtis E. Montgomery, Harrisburg
Fred C. Endres, 4609A Prospect Rd., Peoria Hts.

Officers of County Medical Societies—1964

ADAMS COUNTY
President: Carl Rylander, 1416 Maine St., Quincy
Secretary: Merle W. Jacobs, R.F.D. #4, Quincy
Members: 70—District #6
December

ALEXANDER COUNTY
President: Flint Bondurant, 800 Commercial Ave., Cairo
Secretary: James L. Crouse, 1201½ Washington Ave., Cairo
Members: 9—District #10

BOND COUNTY
President: M. Kenneth Kaufmann, 207 N. 2nd St., Greenville
Secretary: Charles R. Daisy, 308 W. College, Greenville
Members: 7—District #7—Annual Meeting: January

BOONE COUNTY
President: Everett F. Dettmann, 519 S. State St., Belvidere
Secretary: Maurice J. Carlisle, 115 W. Lincoln Ave., Belvidere
Members: 12—District #1—Annual Meeting: December

BUREAU COUNTY
President: Arthur D. Poppens, 777 S. Main St., Princeton
Secretary: Karl Dexter Nelson, 101 Park Ave. East, Princeton
Members: 35—District #2

CARROLL COUNTY
President: C. G. Piper, 113½ W. Market St., Mt. Carroll
Secretary: Karl H. Reddies, 333 Chicago Ave., Savanna
Members: 13—District #1—Annual Meeting: December

CASS-BROWN COUNTY
President: Robert A. Spencer, 115 W. 4th St., Beardstown
Secretary: Arthur G. Hyde, 507 Washington St., Beardstown
Members: 11—District #6

CHAMPAIGN COUNTY
President: Charles T. Moss, 410 E. Springfield St., Champaign
Secretary: H. Ewing Wachter, 104 W. Clark St., Champaign
Members: 150—District #8—Annual Meeting: November

CHICAGO MEDICAL SOCIETY
President: Harold A. Sofield, 310 S. Michigan Ave., Chicago
President Elect: Noel G. Shaw
Secretary: Francis W. Young
Executive Administrator: Mr. John W. Neal
Members: 6,000+—District #3—Annual Meeting: June

CHRISTIAN COUNTY
President: I. DelValle, 311 S. Main St., Taylorville
Secretary: J. W. Murphy, 301 S. Webster St., Taylorville
Members: 23—District #7

CLARK COUNTY
President: Howard G. Johnson, 22 W. Main St., Casey
Secretary: Eugene P. Johnson, 22 W. Main St., Casey
Members: 6—District #8—Annual Meeting: January

CLAY COUNTY
President: A. Paul Naney, 433 E. 7th St., Flora
Secretary: M. H. Parker, P.O. Box 98, Louisville

Members: 10—District #7—Annual Meeting: January

CLINTON COUNTY
President: J. Roger Sosa, Germantown
Secretary: Walter R. Ketterer, 289 N. Main St., Breese
Members: 11—District #7—Annual Meeting: January

COLES-CUMBERLAND COUNTY
President: J. D. Heath, Eastern Illinois University, Charleston
Secretary: Stanley W. Thiel, 213 S. 17th St., Mattoon
Members: 47—District #8—Annual Meeting: January

CRAWFORD COUNTY
President: Randolph F. Olmsted, 408 W. Walnut St., Robinson
Secretary: John W. Long, Robinson
Members: 15—District #8—Annual Meeting: December

DEKALB COUNTY
President: O. L. Lindeen, Elm Street Clinic, Sycamore
Secretary: P. W. Carney, DeKalb Clinic, DeKalb
Members: 40—District #1—Annual Meeting: November

DEWITT COUNTY
President: John W. Veirs, 219 E. Main St., Clinton
Secretary: Charles A. Ramey, 215 E. Main St., Clinton
Members: 12—District #5—Annual Meeting: January

DOUGLAS COUNTY
President: John Hill, Tuscola
Secretary: Max E. Johnson, Newman
Members: 15—District #8—Annual Meeting: December

DUPAGE COUNTY
President: William C. Perkins, 123 Galena St., West Chicago
Secretary: Charles A. Lang, 222 E. Willow, Wheaton
Corresponding Secretary: Mrs. Lillian Widmer, 222 E. Willow, Wheaton
Members: 231—District #11—Annual Meeting: December

EDGAR COUNTY
President: Floyd B. Weaver, P.O. Box 58, Kansas
Secretary: James H. Acklin, 511 N. Main St., Paris
Members: 16—District #8—Annual Meeting: March

EDWARDS COUNTY
President: Charles P. Salisburg, 10 S. 4th St., Albion
Secretary: Andrew Krajec, P.O. Box 336, West Salem
Members: 5—District #9

EFFINGHAM COUNTY
President: Peter C. Supan, 112 E. Section, Effingham
Secretary: James R. Gartner, 300 N. Maple St., Effingham
Members: 23—District #7

FAYETTE COUNTY
President: Joshua H. Weiner, 503½ Gallatin St., Vandalia
Secretary: Edward A. Kuehn, 515½ Gallatin St., Vandalia
Members: 9—District #7—Annual Meeting: January

FORD COUNTY
President: Paul W. Sunderland, 214 N. Sangamon St., Gibson City
Secretary: Alan Olson, Paxton Clinic, Paxton
Members: 15—District #11—Annual Meeting: January

FRANKLIN COUNTY
President: Adolph Gilula, 106 E. Oak St., West Frankfort
Secretary: Owen H. Taylor, 118½ E. Main St., West Frankfort
Members: 24—District #9—Annual Meeting: December

FULTON COUNTY
President: Robert Sager, Canton
Secretary: Joel P. Blancaflor, Lewistown
Members: 26—District #4—Annual Meeting: January

GALLATIN COUNTY
President: Joseph Bryant, Ridgway
Secretary: James A. Kirby, New Haven
Members: 4—District #9

GREENE COUNTY
President: Ludwig Dech, 215A W. Clay St., Roodhouse
Secretary: Paul A. Dailey, 620 N. Main St., Carrollton
Members: 8—District #6—Annual Meeting: December

HANCOCK COUNTY
President: James Coeur, 545 Wabash St., Carthage
Secretary: Ilse Erika Bruehsel, Warsaw Clinic, Warsaw
Members: 2—District #4
December

HENDERSON COUNTY—1963
President: Elmer Swann, Oquawka
Secretary: Harold Bock, Stronghurst
Members: 2—District #4

HENRY COUNTY
President: L. N. Wathier, 121½ S. State St., Geneseo
Secretary: A. W. Wellstein, 213 W. First St., Geneseo
Members: 33—District #4—Annual Meeting: November

IROQUOIS COUNTY
President: John Courtright, Roberts Clinic, Watseka
Secretary: Harry Barnett, P.O. Box 128, Ashkum
Members: 23—District #11—Annual Meeting: December

JACKSON COUNTY
President: Martin H. Powell, Jr., 306 W. Main St., Carbondale
Secretary: Donald R. Darling, 404 W. Main St., Carbondale
Members: 50—District #10—Annual Meeting: December

JASPER COUNTY
President: Don L. Hartrich, Newton
Secretary: C. O. Absher, Newton
Members: 3—District #8

JEFFERSON-HAMILTON COUNTY
President: Alan W. Anderson, 117 North 10th St., Mt. Vernon
Secretary: Kenneth A. Peart, Doctor's Park, Mt. Vernon
Members: 24—District #9—Annual Meeting: January

JERSEY COUNTY
President: Robert G. Mindrup, 300 S. Washington St., Jerseyville
Secretary: W. Clark Doak, 300 S. Washington St., Jerseyville
Members: 12—District #6

JODAVIESS COUNTY
President: Delbert O. Williams, Jr., Stockton
Secretary: William G. Gillies, 300 Summit St., Galena
Members: 11—District #1—Annual Meeting: February

JOHNSON COUNTY
President: W. J. Wakefield, Vienna
Secretary: E. A. Veach, Vienna
Members: 3—District #9—Annual Meeting: January

KANE COUNTY
President: J. D. Milligan, 370 Summit St., Elgin
Secretary: Robert W. Ollayos, 806 W. Highland Ave., Elgin
Corresponding Secy: Miss Elsa Carlson, 17 N. 6th St., Geneva
Members: 242—District #1—Annual Meeting: October

KANKAKEE COUNTY
President: John C. Burnett, 150 S. Evergreen Ave., Kankakee
Secretary: Herbert P. Swartz, 450 Kennedy Dr., Kankakee
Members: 74—District #11

KENDALL COUNTY
President: Harold Wright, Yorkville
Secretary: John P. Cullinan, Oswego
Members: 10—District #11

KNOX COUNTY
President: E. Gordon Behrents, 320 N. Kellogg, Galesburg
Secretary: John J. Holland, 511 Bondi Bldg., Galesburg
Members: 64—District #4—Annual Meeting: November

LAKE COUNTY
President: Kenneth L. Morris, 1616 Grand Ave., Waukegan
Secretary: Ray C. Johnston, 1616 Grand Ave., Waukegan
Executive Secy: Mrs. Howard N. Schulz, P.O. Box 148, Gurnee
Members: 216—District #1—Annual Meeting: December

LASALLE COUNTY
President: H. Vernon Madsen, Ottawa
Secretary: J. F. Wacker, Mendota Community Hospital, Mendota
Members: 103—District #2—Annual Meeting: November

LAWRENCE COUNTY
President: Gilbert Miller, Kensler Bldg., Lawrenceville
Secretary: Charles G. Stoll, 802 Jefferson St., Lawrenceville
Executive Secy: Miss Ruth Gariepy, County Hospital, Lawrenceville
Members: 15—District #8—Annual Meeting: November

LEE COUNTY
President: Charles LeSage, 114 E. Everett St., Dixon
Secretary: Samuel Adler, N. Ottawa Dr., Dixon
Members: 23—District #2—Annual Meeting: January

LIVINGSTON COUNTY
President: Lucian A. Mosciski, Fairbury
Secretary: George T. Crout, 200 N. Jackson St., Flanagan
Members: 32—District #2—Annual Meeting: February

LOGAN COUNTY
President: James B. Borgerson, 119 S. Vine St., Mt. Pulaski
Secretary: Glen E. Tomlinson, 301 Walnut St., Lincoln
Members: 25—District #5—Annual Meeting: December

MCDONOUGH COUNTY
President: Joseph Symmonds, Standard Clinic, Macomb
Secretary: Frank DeRango, Doctor's Ln., Macomb
Members: 22—District #4—Annual Meeting: October

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UNIVERSITY OF MARYLAND
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McHenry County
President: Helmuth Stahlecker, Woodstock
Secretary: Mladen Mijanovich, Marengo
Ex. Secy: Mrs. J. Rosulek, 305 Kimball, Woodstock
Members: 52—District #1—Annual Meeting: January

McLean County
President: A. Edward Livingston, 429 N. Main St., Bloomington
Secretary: Preston S. Houk, 429 N. Main St., Bloomington
Ex. Secy: Mr. David W. Meister, 429 N. Main St., Bloomington
ALSO: 427 First National Bank, Peoria
Members: 87—District #5—Annual Meeting: December

Macon County
President: Sterling G. Parker, 462 W. William St., Decatur
Secretary: William T. Couter, 1314 N. Main St., Decatur
Ex. Secy: Mrs. Mary D. LeMar, 1800 E. Lake Shore Dr., Decatur
Members: 133—District #7—Annual Meeting: December

Macoupin County
President: Roger Quinn, 224 E. Main St., Carlinville
Secretary: Joseph J. Grandone, 109 W. Pine St., Gillespie
Members: 21—District #6—Annual Meeting: November

Madison County
President: Hubert Lee Allen, 604 E. Broadway, Alton
Secretary: Leo R. Green, 1114 Milton Rd., Alton
Members: 130—District #6—Annual Meeting: December

Marion County
President: Peter L. Basch, Patoka
Secretary: O. J. Burroughs, 202 E. Third St., Centralia
Members: 33—District #7—Annual Meeting: December

Mason County
President: Donald E. Stehr, 102 E. Market St., Havana
Secretary: George A. Kudirka, 101 W. Elm St., Mason City
Members: 13—District #5—Annual Meeting: April

Massac County
President: George Green, 600 Ferry St., Metropolis
Secretary: Enrique T. Yap, 510 W. 10th St., Metropolis
Members: 6—District #9

Menard County
President: Stanley Paulauskis, Greenview
Secretary: H. K. Moulton, Petersburg
Members: 4—District #5—Annual Meeting: March

Mercer County
President: John E. Bohan, Alexis
Secretary: James W. Hastings, 209 S. College Ave., Aledo
Members: 8—District #4

Monroe County
President: Hans A. Reichel, P.O. Box 201, Valmeyer
Secretary: Otto L. Kremer, 113 W. Locust St., Columbia
Members: 10—District #10—Annual Meeting: March

Montgomery County
President: James D. Telfer, 400 Rountree, Hillsboro
Secretary: George A. Telfer, 400 Rountree, Hillsboro
Members: 15—District #5—Annual Meeting: December

Morgan County
President: Frank B. Norbury, 1631 Mound Ave., Jacksonville
Secretary: Oscar C. Zink, Jr., 316 W. State St., Jacksonville
Members: 46—District #6—Annual Meeting: December

Moultrie County
President: H. E. Kendall, Sullivan
Secretary: Eugene J. Boros, Bethany
Members: 6—District #7

Ogle County
President: John O. Cletcher, Rochelle
Secretary: L. Thomas Koritz, 324 Lincoln, Rochelle
Members: 25—District #1—Annual Meeting: October

Peoria County
President: Harrison C. Putman, 427 First National Bank Bldg., Peoria
Secretary: Robert S. Easton, 427 First National Bank Bldg., Peoria
Ex. Sec'y: Mr. David W. Meister, 427 First National Bank Bldg., Peoria
Members: 219—District #4—Annual Meeting: December

Perry County
President: Ben A. Kinsman, 207½ E. Main St., DuQuoin
Secretary: James B. Stotlar, N. Walnut St., Pinckneyville
Members: 17—District #10—Annual Meeting: December

Piatt County
President: A. D. Furry, Monticello
Secretary: G. G. Green, Monticello
Members: 7—District #7—Annual Meeting: December

PIKE-CALHOUN COUNTY
President: J. M. Bailis, 112 W. Jefferson St., Pittsfield
Secretary: James H. Rutledge, 226 S. Monroe St., Pittsfield
Members: 9—District #6—Annual Meeting: December

PULASKI COUNTY
President: James G. Conger, Mounds
Secretary: Burton Bagby, Mounds
Members: 4—District #10—Annual Meeting: January

RANDOLPH COUNTY
President: P. E. Reid, 120 S. Market St., Sparta
Secretary: L. E. Fiene, 118 W. Broadway, Sparta
Members: 16—District #10—Annual Meeting: January

RICHLAND COUNTY
President: Lawrence J. Knox, R.F.D. #6, Olney
Secretary: Eldon Van Sandt, 11 Douglas Dr., Olney
Members: 21—District #8—Annual Meeting: December

ROCK ISLAND COUNTY
President: Theodore Grevas, 1800 Third Ave., Rock Island
Secretary: D. W. Murrell, 532—19th Ave., Moline
Members: 129—District #4—Annual Meeting: December

ST. CLAIR COUNTY
President: Bart Cole, 8601 W. Main St., Belleville
Secretary: Charles Frazer, 258 N. 14th St., East St. Louis
Ex. Sec'y: Mrs. Lois Morgan, 1602 W. Main St., Belleville
Members: 161—District #10—Annual Meeting: October

SALINE-POPE-HARDIN COUNTY
President: Alex Goldstein, Rosiclare
Secretary: William J. Blackard, 203 N. Vine St., Harrisburg
Members: 22—District #9—Annual Meeting: January

SANGAMON COUNTY
President: Henry F. Berchtold, 926 S. Seventh St., Springfield
Secretary: William DeHollander, St. John's Hospital, Springfield
Members: 182—District #5—Annual Meeting: June

SCHUYLER COUNTY
President: Verne M. Corman, Rushville
Secretary: Henry C. Zingher, West Side Sq., Rushville
Members: 5—District #4—Annual Meeting: January

SHELBY COUNTY
President: Louis Chabner, 120 S. Broadway, Shelbyville
Secretary: R. H. Larson, 400 S. Walnut St., Shelbyville
Members: 16—District #7—Annual Meeting: January

STEPHENSON COUNTY
President: F. J. Lownik, 1110 S. Park Blvd., Freeport
Secretary: Howard J. Stickle, 208 First National Bank, Freeport
Members: 40—District #1—Annual Meeting: January

TAZEWELL COUNTY
President: Robert L. Tucker, 1317 Park Ave., Pekin
Secretary: Harry B. Shepard, 427 First National Bank Bldg., Peoria
Ex. Secy: Mr. David W. Meister, 427 First National Bank Bldg., Peoria
Members: 40—District #5—Annual Meeting: December

UNION COUNTY
President: John Pfau, 108 E. Davie St., Anna
Secretary: William H. Whiting, P.O. Box 410, Anna
Members: 12—District #10—Annual Meeting: December

VERMILION COUNTY
President: W. F. Lantz, 208 Park St., Danville
Secretary: L. W. Tanner, 7 N. Virginia St., Danville
Members: 98—District #8—Annual Meeting: December

WABASH COUNTY
President: C. L. Johns, 114 W. 5th St., Mt. Carmel
Secretary: C. L. Johns, 114 W. 5th St., Mt. Carmel
Members: 9—District #9—Annual Meeting: January

WARREN COUNTY
President: James W. Marshall, 319 N. Main St., Monmouth
Secretary: Glenn W. Chamberlin, 219 E. Euclid Ave., Monmouth
Members: 14—District #4—Annual Meeting: January

WASHINGTON COUNTY
President: Walter P. Plassman, P.O. Box 335, Ashley
Secretary: William P. Lesko, Washington & Adams, Nashville
Members: 7—District #10—Annual Meeting: January

WAYNE COUNTY
President: Charles J. Jannings, 101 E. Center St., Fairfield
Secretary: Gilbert Ransom, 209 S.E. Third St., Fairfield

Members: 9—District #9—Annual Meeting: December

WHITE COUNTY
President: S. B. Abelson, Doctor's Clinic, Carmi
Secretary: D. R. Hansard, 203 S. Church St., Carmi
Members: 6—District #9—Annual Meeting: December

WHITESIDE COUNTY
President: John J. McDonnell, Professional Bldg., Rock Falls
Secretary: LaMonte Ballard, 102 E. Miller Rd., Sterling
Members: 49—District #2—Annual Meeting: June

WILL GRUNDY COUNTY
President: John J. McLaughlin, 1000 W. Jefferson St., Joliet
Secretary: Frank C. Bender, 704 Division St., Plainfield
Ex. Secy: Mr. Robert Best, 305 N. Ottawa St., Joliet
Members: 165—District #11—Annual Meeting: November

WILLIAMSON COUNTY
President: Daniel Roth, 121 N. 13th St., Herrin
Secretary: Herbert V. Fine, 110 N. Division St., Carterville
Members: 25—District #9—Annual Meeting: February

WINNEBAGO COUNTY
President: Marshall O. Alexander, Memorial Hospital, Rockford
Secretary: Joseph B. Perez, 6670 E. State St., Rockford
Ex. Secy: Mr. D. A. Westbrook, 310 N. Wyman St., Rockford
Members: 232—District #1—Annual Meeting: January

WOODFORD COUNTY
President: Neil Esposito, Minonk
Secretary: Victor V. Jay, 601 N. Jefferson St., Washburn
Members: 11—District #2—Annual Meeting: November

JOINT COUNTY SOCIETIES
Coles-Cumberland
Jefferson-Hamilton
Saline-Pope-Hardin
Will-Grundy

NO ORGANIZED SOCIETY
Brown
Calhoun
Gallatin
Marshall
Putnam
Scott
Stark

Committees Provided for in Bylaws

(Elected by the House of Delegates)
Responsibilities and Purposes Described in Constitution and Bylaws

	Term Expires
COMMITTEE ON DISASTER MEDICAL CARE (Bylaws)	
Max Klinghoffer, Chairman 127 E. Vallette St., Elmhurst	1967
Jack Baldwin 1315 S. Sixth St., Springfield	1965
Harold C. Lueth 636 Church St., Evanston	1967
Carl F. Steinhoff 8909 N. Kilpatrick, Skokie	1966
Charles W. Young 404 W. Main St., Carbondale	1966

AUXILIARY REPRESENTATION:
Mrs. John M. Tindal
5515 W. Fulton St., Chicago
STAFF: James Slawny

MEDICAL SELF-HELP TRAINING SUB-COMMITTEE
Charles W. Young, Chairman
404 W. Main St., Carbondale
Leonard F. Roblee
1000 State St., Lockport
George Saxl
111 W. Grand Ave., Bensenville
Franklin D. Yoder
State Office Bldg., Springfield
Edward N. Zinschlag
Link Clinic, Mattoon

GRIEVANCE COMMITTEE (Bylaws)

Arkell M. Vaughn, Chairman
2015 E. 79th St., Chicago 1967
A. K. Baldwin
229 Fifth St., Carrollton 1967
Allison L. Burdick, Sr.
1637 N. Mobile, Chicago 1965
Frank H. Fowler
6356 Diversey Ave., Chicago 1966
Victor V. Rockey
324 W. Galena Ave., Freeport 1966
J. E. Wheeler
110 N. High St., Belleville 1965
STAFF: James Slawny

COMMITTEE ON LABORATORY EVALUATION (Bylaws)

James B. Hartney, Chairman
410 Lake St., Oak Park 1967
Thomas P. deGraffenried
Deval Shopping Center, DeKalb 1967
John Maloney
1107 Broadway, Normal 1966
Theodore Z. Polley
120 Scott St., Joliet 1965
Jack Williams
Prudential Plaza, Chicago 1966
STAFF: Paul S. Swarts

COMMITTEE ON MEDICAL EDUCATION (Bylaws)

Daniel Ruge, Chairman
700 N. Michigan Ave., Chicago 1966
Herschel L. Browns
1800 Wilson Ave., Chicago 1965
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531 E. Grant St., Macomb 1967
J. Mather Pfeiffenberger
200 W. Third St., Alton 1966
Clifton L. Reeder
310 S. Michigan Ave., Chicago 1967
STAFF: Albert G. Boeck

COMMITTEE ON OCCUPATIONAL HEALTH (Bylaws)

Edward C. Holmblad, Chairman
1350 N. Lake Shore Dr., Chicago 1967
Milton H. Kronenberg
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11406 S. Parnell Ave., Chicago 1966
Arthur E. Sulek
1902 Seventh St., Rockford 1967
Chester R. Zeiss
208 S. LaSalle St., Chicago 1965
STAFF: Paul S. Swarts

COMMITTEE ON PREPAYMENT PLANS AND ORGANIZATION (Bylaws)

Maurice M. Hoeltgen, Chairman
1836 W. 87th St., Chicago 1967
Philip C. Lynch
1314 N. Main St., Decatur 1966
Michael Saxon
Oswego 1967
H. Kenneth Scatliff
4753 N. Broadway, Chicago 1966
E. Lee Strohl
122 S. Michigan Ave., Chicago 1965
STAFF: Walter R. Livingston

COMMITTEE ON PUBLIC SAFETY (Bylaws)

Julius M. Kowalski, Chairman
436 Park Ave. East, Princeton 1967
George H. Irwin
1791 Howard St., Chicago 1967
Edwin A. Lee
501 S. 13th St., Springfield 1966
Frank W. Newell
4500 N. Mozart Ave., Chicago 1966
Walter Plassman
P.O. Box 335, Ashley 1965
AUXILIARY REPRESENTATION:
Mrs. Preston Houk
207 Parkview Dr., Bloomington
STAFF: James Slawny

(Appointed by the Board of Trustees)

Responsibilities and Purposes Described in Constitution and Bylaws

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Clifford E. Smith
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Leo Zimmerman
55 E. Washington St., Chicago 1966
STAFF: Paul S. Swarts

SUBCOMMITTEE ON MUSEUM OF MEDICAL HISTORY

The Committee on the Museum of Medical History shall be a subcommittee of the Archives Committee, and shall be responsible for the establishment of a Museum of Medical Progress in Illinois. It shall collect items of medical historical importance and cooperate with the Historical Museum of the State of Illinois and various historical societies in the education of the public on the importance of medicine as it pertains to the documentation of the progress which has been made in the care and treatment of patients in Illinois.

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6060 S. Drexel Blvd., Chicago 1965

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7579 Lake St., River Forest 1966

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Samuel A. Levinson
3730 Lake Shore Dr., Chicago 1967
Maurice D. Murfin
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Harry D. Nesmith
RFD #1, Salem 1966
Leo P. A. Sweeney
10725 S. Western Ave., Chicago 1965
Harold C. Voris
30 N. Michigan Ave., Chicago 1965

CONSULTANT:
Edmund F. Foley
359 N. Ridgeland Ave., Oak Park

EX-OFFICIO:
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STAFF: Paul S. Swarts

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H. Close Hesseltine
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C. J. Jannings, III
101 E. Center St., Fairfield 1966

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Ralph N. Redmond
101 E. Miller Rd., Sterling
Philip G. Thomsen
13828 Lincoln Ave., Dolton

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602 Oak St., Lena
Mrs. Wilson West
14 Oakwood Dr., Belleville

LEGAL COUNSEL:
John W. Neal
310 S. Michigan Ave., Chicago
Frank Pfeifer
510 Monroe St., Springfield

STAFF: Paul S. Swarts

COMMITTEE ON MEDICAL BENEVOLENCE (Bylaws)

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Avon 1967
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715 Lake St., Oak Park 1966
John H. Steinkamp
824 Van Buren St., Belvidere 1965

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MEDICAL-LEGAL COMMITTEE (Bylaws)

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720 N. Michigan Ave., Chicago 1967
W. W. Dalitsch
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Darrell H. Trumpe
St. John's Sanatorium, Springfield 1966
George C. Turner
670 N. Michigan Ave., Chicago 1966

STAFF: Paul S. Swarts

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701 N. Walnut St., Springfield 1965
Charles J. Weigel
7579 Lake St., River Forest 1966

EX-OFFICIO:
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1129 S. 2nd St., Springfield

STAFF: James Slawny

RADIO-TELEVISION SUB-COMMITTEE
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Max Klinghoffer
127 E. Vallette, Elmhurst
Bertram B. Moss
5360 N. Lincoln, Chicago

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Louis D. Boshes
30 N. Michigan Ave., Chicago 1965
John B. Condon
30 N. Michigan Ave., Chicago 1965
Richard A. DeWall
1041 Jackson Ave., River Forest 1967
Robert T. Fox
2136 Robin Crest Lane, Glenview 1966
Chauncey C. Maher, Jr.
709 Myers Bldg., Springfield 1965
Charles P. McCartney
5841 S. Maryland Ave., Chicago 1966
Harold McGinnis
2304 E. Oakland Ave., Bloomington 1967
Robert G. Page
950 E. 59th St., Chicago 1967
Gordon L. Snider
7936 S. Luella Ave., Chicago 1966
J. Robert Thompson
1129 N. Elmwood Ave., Oak Park 1966

AUXILIARY REPRESENTATION:
Mrs. Glen Harrison
148 N. Ahwahnee Rd., Lake Forest
Mrs. Richard E. Westland
5114 Farwell Ave., Skokie

STAFF: Albert G. Boeck

Section Officers—Annual Convention

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Secretary: John Hyde, 715 Lake, Oak Park

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Chairman: Vincent J. Collins, 1825 W. Harrison St., Chicago
Secretary: John T. Nelson, St. Joseph's Hospital, Elgin

DERMATOLOGY:
Chairman: H. J. Burstein, 250 N. Water St., Decatur
Secretary: Louis Rubin, 2300 N. Rockton Ave., Rockford

EYE, EAR, NOSE & THROAT:
Chairman: Roland I. Pritikin, Talcott Bldg., Rockford
Secretary: Emanuel M. Skolnik, 1853 W. Polk St., Chicago

MEDICINE
Chairman: Roy J. Philipp, Box 1030, Carbondale Clinic, Carbondale
Secretary: Angelo P. Creticos, 67 E. Madison St., Chicago

NEUROLOGY & PSYCHIATRY
Chairman: Louis Boshes, 30 N. Michigan Ave., Chicago
Secretary: Harold E. Himwich, Galesburg State Research Hospital, Galesburg

OBSTETRICS & GYNECOLOGY
Chairman: Paul A. Raber, 149 W. King St., Decatur
Secretary: Alan Sampson, Shady Lane, Elmhurst

PATHOLOGY:
Chairman: Joseph D. Boggs, 707 W. Fullerton Ave., Chicago
Secretary: J. Robert Thompson, 5601 N. Pulaski Rd., Chicago

PEDIATRICS:
Chairman: Ellis H. Harris, 363 Park Ave., Glencoe
Secretary: Paul P. Pierce, 1900 Brown St., Alton

PHYSICAL MEDICINE:
Chairman: Y. T. Oester, 706 S. Wolcott St., Chicago
Secretary: H. Worley Kendall, 619 N. Glen Oak, Peoria

PREVENTIVE MEDICINE AND PUBLIC HEALTH
Chairman: Charles A. Lang, 222 E. Willow, Wheaton
Secretary: John B. Hall, 329 S. Wood St., Chicago

RADIOLOGY
Chairman: Fredric D. Lake, 2520 N. Lakeview, Chicago
Secretary: Howard C. Neucks, 602 W. University, Urbana

SURGERY:
Chairman: Harold V. Norris, 4th Floor Farmers Bank Bldg., Jacksonville
Secretary: James A. Rooney, 948 N. East Ave., Oak Park

Committees Appointed by the Board of Trustees

Committees within the Board

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Caesar Portes, *Chairman*
Bernard Klein
Ted LeBoy
Jacob E. Reisch
Wm. H. Schowengerdt
W. C. Scrivner
C. K. Wells
Paul P. Youngberg

STAFF: Robert L. Richards

EDUCATIONAL & SCIENTIFIC FOUNDATION

Harlan English, *Chairman,* Immediate Past President
William E. Adams, Chairman of the Board
Edward A. Piszczek, President
Jacob E. Reisch, Secretary-Treasurer

EX-OFFICIO:

Robert L. Richards, Executive Administrator

STAFF: Albert G. Boeck

EXECUTIVE COMMITTEE

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Edward A. Piszczek, President
Burtis E. Montgomery, President-Elect
Jacob E. Reisch, Secretary-Treasurer
Harlan English, Trustee-at-Large
Carl E. Clark, Chairman, Finance Committee
Newton DuPuy, Chairman, Policy Committee

STAFF: Robert L. Richards

FINANCE COMMITTEE

Carl E. Clark, *Chairman*
Jacob E. Reisch
Ralph N. Redmond
Philip Thomsen

STAFF: Robert L. Richards

POLICY COMMITTEE

Newton DuPuy, *Chairman*
Arthur F. Goodyear
Frank J. Jirka

STAFF: Frances C. Zimmer

Other Board Committees

COMMITTEE ON AGING (Board of Trustees)

Edward W. Cannady, Chairman
4601 State St., East St. Louis
Preston V. Dilts
1025 S. Seventh St., Springfield
Edward E. Gordon
8655 S. University Ave., Chicago
Ray C. Johnston
1616 Grand Ave., Waukegan
Joseph R. Mallory
Link Clinic, Mattoon
Ernest G. McEwen
636 Church St., Evanston
Henry T. Ricketts
950 E. 59th St., Chicago
Lawrence J. Rossi
Hopedale Complex, Hopedale
Martin H. Seifert
1035 Forest Ave., Wilmette
Roger F. Sondag
518 State Office Bldg., Springfield
Thomas T. Tourlentes
Research Hospital, Galesburg
Henry M. Wilson, Jr.
1101 Main St., Peoria

AUXILIARY REPRESENTATION:

Mrs. Howard A. Lowy
112 Pekin Ave., East Peoria

STAFF: Walter R. Livingston

Responsibilities and Purposes

The functions of the Committee on Aging encompass the broad field of aging with special consideration for the types of medical services and patterns of care available to the aging and the economics involved. The committee cooperates with the American Medical Association's Committee on Aging and other appropriate agencies.

Included among the committee's activities are the study and support of expansion of additional home care programs in Illinois; relationships with nursing homes, home nursing, homemaker programs, and other programs involving services oriented toward the aging; and liaison with other agencies having a similar interest.

By direction of the 1964 House of Delegates, major emphasis during the coming year is to be directed toward implementation of county medical society programs described in the Manual on Aging, through the active encouragement and assistance of the District Committees on Aging and the State Committee.

COMMITTEE TO STUDY THE ANNUAL CONVENTION (Board of Trustees)

George F. Lull, Chairman
400 E. Randolph St., Chicago

E. Chester Bone
800 W. State St., Jacksonville
Edwin S. Hamilton
151 N. Schuyler Ave., Kankakee
William M. Lees
7000 N. Kenton Ave., Lincolnwood
H. Marchmont-Robinson
14 E. Jackson Blvd., Chicago
Norman Powers
3125 Prospect Rd., Peoria
STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee was appointed to make a five-year study of the ISMS Annual Convention; to review and evaluate its scientific effectiveness; to study its pattern of relying on scientific sections for the major portion of the program; to judge its value to Illinois physicians; and to recommend to the Committee on Scientific Assembly any changes which would improve the convention.

LIAISON COMMITTEE TO BLUE CROSS-BLUE SHIELD (Board of Trustees)
I. E. Bartlett, Chairman
325 W. Wesley Ave., Wheaton
Chairman, Committee on Medical Economics
C. Elliott Bell
964 Citizens Bldg., Decatur
Chairman, Committee on Relative Value
Maurice M. Hoeltgen
1836 W. 87th St., Chicago
Chairman, Committee on Prepayment Plans and Organizations
Daniel Ruge
700 N. Michigan Ave., Chicago
Chairman, Committee on Medical Education
STAFF: Walter R. Livingston

Responsibilities and Purposes

The function of the committee is to provide a channel of communication between Blue Cross-Blue Shield Plans and the Illinois State Medical Society on matters of mutual concern. Specific problems which may arise as a result of this liaison will be referred to appropriate committees for detailed study.

COMMITTEE ON CANCER CONTROL
(Board of Trustees)
Augusta Webster, Chairman
55 E. Washington St., Chicago
Kent W. Barber
1416 Maine St., Quincy
Warren H. Cole
840 S. Wood St., Chicago
Robert Field
13000 S. Maple Ave., Blue Island
Russell M. Jensen
319 N. Main St., Monmouth
Franklin J. Moore
55 E. Washington St., Chicago
R. G. Mrazek
3239 S. Oak Park Ave., Berwyn
W. R. Scott
Carbondale Clinic, Carbondale
Thomas Sellett
101 E. Miller Rd., Sterling
R. F. Sondag
518 State Office Bldg., Springfield
EX-OFFICIO:
J. Ernest Breed
55 E. Washington St., Chicago
Caesar Portes
25 E. Washington St., Chicago
AUXILIARY REPRESENTATION:
Mrs. Newton DuPuy
1842 Grove Ave., Quincy
STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on cancer matters for the ISMS. It shall evaluate available information and make recommendations to the Board on the position the ISMS should take in this area of scientific endeavor. It shall cooperate with institutions and voluntary health agencies in disseminating information on cancer subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

COMMITTEE ON CARDIOVASCULAR DISEASE
(Board of Trustees)
Oglesby Paul, Chairman
1012 Westmoor Rd., Winnetka
Wright Adams
5755 Harper Ave., Chicago
Hugh S. Espey
25 Lincoln Hill, Quincy
Arnold S. Moe
4601 State St., East St. Louis
A. Paul Naney
433 E. 7th, Flora
STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on cardiovascular disease matters for the ISMS. It shall evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area of scientific endeavor. It shall cooperate with institutions and voluntary health agencies in disseminating information on cardiovascular subjects to the profession and to the public. It shall be on the alert for misleading or fallacious

programs and information which need correction for the protection of the public.

Special Committee to Study the Policies of the Chamber of Commerce of the United States (Board of Trustees)

Edward A. Piszczek, CHAIRMAN, President
6410 N. Leona Ave., Chicago
Newton DePuy, Chairman of Policy Committee
1101 Maine St., Quincy
Burtis E. Montgomery, President-Elect
37 S. Main St., Harrisburg
Ex-Officio: Robert L. Richards
Staff: Robert L. Richards

Responsibilities and Purposes

The purpose of the committee is inherent in its title, but if the committee finds reason to believe that the policies of the Chamber should be altered, it will be necessary to schedule a hearing with the Policy Committee of the Chamber. Procedures for changes in policy are firmly established. Copies of the Chamber Policies are available to the committee.

Committee on Child Health
(Board of Trustees)

Ralph Kunstadter, Chairman
664 N. Michigan Ave., Chicago
Oliver Crawford
4911 S. Greenwood Ave., Chicago
Eugene F. Diamond
11618 Oakley Ave., Chicago
R. E. Dukes
602 W. University Ave., Urbana
W. W. Fullerton
101 N. Market St., Sparta
Edward Hess
55 E. Washington St., Chicago
H. R. Hone
151 Herrick Rd., Riverside
Edward F. Lis
840 S. Wood St., Chicago
Fred P. Long
2116 N. Sheridan Rd., Peoria
J. Keller Mack
922 S. 4th St., Springfield
Franklin A. Munsey
1429 Myott Ave., Rockford
Kenneth S. Nolan
172 Schiller, Elmhurst
H. F. Philipsborn, Jr.,
Box 11, Glencoe
William H. Schwingel
57 Fox St., Aurora
W. G. Steiner
140 W. Sale St., Tuscola
Norman T. Welford
656 58th St., Hinsdale
W. M. Whitaker
1416 Maine St., Quincy
Staff: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on matters pertaining to child health. It shall evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area and co-operate with institutions and voluntary health agencies in disseminating information pertinent to general child health. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public. It shall conduct educational programs for public enlightenment for the encouragement and the establishment of school health councils; and strive for increased services for exceptional children. It shall conduct, in cooperation with the Maternal Welfare Committee, research on neonatal mortality through the state; and seek the formulation and adoption of uniform school health records.

Committee on Continuing Education
(Board of Trustees)

Robert J. Freeark, Chairman
Cook County Hospital
1825 W. Harrison St., Chicago
Chicago Medical School
Hyman J. Zimmerman
5000 East End Ave., Chicago
University of Chicago
Leon O. Jacobson
950 E. 59th St., Chicago
University of Illinois
Louis R. Limarzi
910 N. East Ave., Oak Park
Northwestern University
Joseph H. Skom
303 E. Superior St., Chicago
Michael Reese Hospital
Ralph H. Kunstadter
664 N. Michigan Ave., Chicago
Passavant Memorial Hospital
Harold Laufman
303 E. Superior St., Chicago
Presbyterian-St. Luke's Hospital
Edwin N. Irons
122 S. Michigan Ave., Chicago
St. Louis (Mo.) University
J. Mather Pfeiffenberger
200 W. Third St., Alton
Stritch School of Medicine-Loyola University
William M. Lees
7000 N. Kenton Ave., Lincolnwood
Washington University (Missouri)
Hubert L. Allen
604 E. Broadway, Alton
James A. Weatherly
108 N. 14th St., Murphysboro
Ex-Officio:
William E. Adams
5805 S. Dorchester Ave., Chicago
Staff: Albert G. Boeck

Responsibilities and Purposes

The committee shall provide a program of continuing education for the practicing physicians of Illinois. This shall include courses in specific medical subjects as requested by component societies as well as speakers on scientific subjects. The committee shall solicit individuals or teams from the medical schools in Illinois, the hospitals and research centers and the body of practitioners to present this program of continuing education. It shall study more effective means of presenting educational material throughout the state. It shall provide additional services to component societies as are deemed necessary to the conduct of an effective program.

Committee on Drug Manual
(Board of Trustees)

James A. Weatherly, Chairman
108 N. 14th St., Murphysboro
Robert C. Muehrcke
1753 W. Congress Pkwy., Chicago
Theodore R. Van Dellen
435 N. Michigan Ave., Chicago
Consultants:
Theodore R. Sherrod, M.D., Ph.D.
1853 W. Polk St., Chicago
Louis Gdalman, R. Ph.
1753 W. Congress Pkwy., Chicago
Staff: Walter R. Livingston

Responsibilities and Purposes

In keeping with the directive of the 1964 House of Delegates, the committee will continue to work with the Illinois Department of Public Aid in an effort to keep the Drug Manual current and effective. When suggestions and comments from the membership are submitted to the committee, it will review them and present them to the Department of Public Aid when necessary. All matters affecting changes in policy should be coordinated with the Medical Advisory Committee.

Editorial Board (Board of Trustees)

Samuel A. Levinson, Chairman
3730 Lake Shore Dr., Chicago
Frederick H. Falls
P. O. Box 47, River Forest
Edwin F. Hirsch
5830 Stony Island Ave., Chicago
James H. Hutton
67 E. Madison St., Chicago
Julius M. Kowalski
436 Park Ave., East, Princeton
Harvey Kravitz
2341 W. Devon Ave., Chicago
Francis L. Lederer
1853 W. Polk St., Chicago
Charles Mrazek
1210 Robinhood Ln. LaGrange Park
Clarence J. Mueller
108 W. 4th St., Sterling
Jacob E. Reisch
1129 S. 2nd St., Springfield
Arkell M. Vaughn
2015 E. 79th St., Chicago
Edward F. Webb
5112 Oakton St., Skokie
Staff: Albert G. Boeck

Responsibilities and Purposes

The responsibilities of this committee lie in the area of the editorial content of the Illinois Medical Journal. It shall make recommendations to the editor concerning the scientific content, regular features and subjects of special interest to the members. It shall serve as a review board for manuscripts which the editor believes require special medical evaluation. It shall assist the editor in any way possible to obtain and present medical manuscripts of the highest quality and maximum interest to the physicians of Illinois.

Committee on Environmental Health
(Board of Trustees)

Edward Press, Chairman
202 Burnham Pl., Evanston
Robert J. Maganini
727 Hickory, Hinsdale
Milton H. Kronenberg
Caterpillar Tractor Co., Peoria
Director, Department of Public Health
Franklin D. Yoder
State Office Bldg.,
400 S. Spring St., Springfield
Chairman, Child Health Committee
Ralph H. Kunstadter
664 N. Michigan Ave., Chicago
Chairman, Laboratory Evaluation Committee
James B. Hartney
333 Sturges Pkwy., Elmhurst
Chairman, Committee on Narcotics & Hazardous Substances
Ross A. Schlich
2828 S. 5th St., Springfield
Chairman, Committee on Occupational Health
Edward C. Holmblad
1350 Lake Shore Dr., Chicago
Chairman, Committee on Radiation
Howard C. Burkhead
Evanston Hospital Association
2650 Ridge Ave., Evanston
Staff: Albert G. Boeck

Responsibilities and Purposes

The committee is responsible for medicine's interest in the relationship of man to his surroundings, particularly those areas which per-

tain to the control of transmissible disease; air, water and soil pollution; health problems related to population growth; urbanization and technicological developments bearing on the ecology of man.

COMMITTEE ON ETHICAL RELATIONS
(Board of Trustees)

Charles Allison, Chairman
1309 Court St., Kankakee
V. B. Adams
301 E. Jefferson St., Macomb
Jerome Joseph Burke
225 Center St., Grayslake
Carl Steinhoff
8909 N. Kilpatrick, Skokie
Warren W. Young
358 E. 115th St., Chicago
STAFF: James Slawny

Responsibilities and Purposes

The responsibilities of this committee include matters involving interpretations of the Principles of Medical Ethics, violations of the Constitution and Bylaws of the ISMS, and its component societies, and charges of misconduct against members of the Society. It shall serve as an appellate body to hear and review cases involving these matters arising from appeals made to the Board by members of the Society.

COMMITTEE ON EYE HEALTH (Board of Trustees)

Frank W. Newell, Chairman
4500 N. Mozart St., Chicago
Peter C. Kronfeld
914 Cherokee Rd., Wilmette
Walter Stevenson
1124 Broadway, Quincy
Manuel Stillerman
119 N. Wabash Ave., Chicago
M. Byron Weisbaum
1211 S. 6th St., Springfield
STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on eye health matters for the ISMS. It shall evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area, and cooperate with institutions and voluntary health agencies in disseminating information on eye health subjects to the profession and to the public. It shall be on the alert for misleading or falacious programs and information which need correction for the protection of the public.

COMMITTEE ON FEE SCHEDULES
(Board of Trustees)

George F. Lull, Chairman
400 E. Randolph St., Chicago
C. Elliott Bell
964 Citizens Bldg., Decatur
Maurice M. Hoeltgen
1836 W. 87th St., Chicago
Franklin J. Moore
55 E. Washington St., Chicago
Carl F. Steinhoff
720 N. Michigan Ave., Chicago
STAFF: Walter R. Livingston

Responsibilities and Purposes

The functions of the Committee on Fee Schedules include the periodic review of the adequacy and the appropriateness of payment schedules resulting from negotiations by the Illinois State Medical Society on behalf of its membership, including the Medicare contract and other fee allowances. Upon request of, and with the approval of the Board of Trustees, the committee may renegotiate fee schedules at appropriate intervals. In conjunction with the activities of other committees, the committee may be called upon to review benefit schedules under prepayment plans, health insurance plans, or consumer-sponsored health care plans.

FIFTY YEAR CLUB COMMITTEE
(Board of Trustees)

Morris Fishbein, Chairman
5454 South Shore Dr., Chicago
George F. Lull
400 E. Randolph St., Chicago
G. C. Otrich
110 N. High St., Belleville
Walter H. Theobald
307 N. Michigan Ave., Chicago
STAFF: James Slawny

Responsibilities and Purposes

This committee shall administer the activities of the "club", composed of physicians who have practiced medicine for 50 years or more. The committee makes arrangements for the annual complimentary luncheon held during the annual convention, honoring members of the club.

COMMITTEE ON HOSPITAL RELATIONS
(Board of Trustees)

Noel G. Shaw, Chairman
2901 Central St., Evanston
John A. Bowman
300 N. Main St., Abingdon
J. W. Buser
4601 State St., East St. Louis
John M. Dorsey
636 Church St., Evanston
Harlan English
909 N. Logan Ave., Danville
Kenneth John Smith
2320 High St., Blue Island
N. A. Thompson
1301 Pine St., Eldorado

STAFF: Walter R. Livingston

Responsibilities and Purposes

Among the functions of the committee are the consideration of all problems bearing on the relationship between physicians and hospitals except those pertaining to medical training. A prime objective of the committee is to encourage hospital staffs to become actively interested in the economics of hospital operation and hospital services. The committee maintains liaison with the Illinois Hospital Association for the purpose of conducting the Annual Joint Medical—Hospital Conference. In areas of health insurance, nursing and items requiring legislative action, the committee should coordinate its activities with the respective committees of the Society to avoid duplication of effort.

The 1964 House of Delegates directed the committee to continue liaison with the Illinois Hospital Association in solving mutual problems pertaining to hospital utilization; medical, nursing and administrative care of patients; hospital costs; accreditation of non-accredited hospitals; and to improve physician—hospital relationships in the interest of patient care by seeking full cooperation among medical staffs.

MEDICAL ADVISORY COMMITTEE TO THE ILLINOIS DEPARTMENT OF PUBLIC AID
(Board of Trustees)

Fred A. Tworoger, Chairman
9130 Kedvale, Skokie
Walter C. Bornemeier
4665 Peterson Ave., Chicago
Charles E. Baldree
10 E. Washington St., Belleville
James R. Cooper
1416 Maine St., Quincy
George J. Dickison
703 Jefferson Bldg., Peoria
Chauncey C. Maher, Jr.
709 Myers Bldg., Springfield
Rex O. McMorris
619 N.E. Glen Oak Ave., Peoria
George T. Mitchell
Marshall
Robert C. Muehrcke
1753 W. Congress Pkwy., Chicago
Frank B. Norbury
1631 Mound Ave., Jacksonville
Frank P. Skaggs
203 N. Vine St., Harrisburg
John H. Steinkamp
824 Van Buren St., Belvidere
R. Kent Swedlund
112 N. Fourth St., Watseka

CONSULTANTS: (to serve on call of the chairman)

Harlan English
909 N. Logan Ave., Danville
George F. Lull
400 E. Randolph St., Chicago
Edwin S. Hamilton
151 N. Schuyler, Kankakee
Burtis E. Montgomery
Harrisburg

STAFF: Walter R. Livingston

Responsibilities and Purposes

The Medical Advisory Committee meets at regular intervals with the staff of the Illinois Department of Public Aid to perform functions necessary to the operation of the medical program under public aid. The committee renders advisory decisions on matters of medical policy in the administration of the quality, quantity, and cost standards of the various public aid programs. The committee operates in conjunction with an established system of county medical advisory committees and serves as a final reviewing body. It acts as a liaison channel between physicians and the Department of Public Aid to foster mutual understanding and good relationships.

By direction of the 1964 House of Delegates, the committee's functions also include a wide program of education of physicians on all levels to explain the administrative details of the care of public aid recipients, and meetings with officials of the county departments of public aid and the local medical societies to see what can be done to smooth the administrative machinery of public assistance programs when necessary.

SUB-COMMITTEE ON ANESTHESIOLOGY

James A. Felts, Chairman
517 Bainbridge Rd., Marion
James H. Rutledge
336 S. Monroe St., Pittsfield
Max S. Sadove
840 S. Wood St., Chicago
Arthur T. Shima
532 N. Oak Park Ave., Oak Park
C. H. Walton
602 W. University Ave., Urbana

SUB-COMMITTEE ON OPHTHALMOLOGY

Leo P. A. Sweeney, Chairman
10725 S. Western Ave., Chicago
Max Hirschfelder
408 W. Second St., Centralia
Derrick Vail
700 N. Michigan Ave., Chicago

SUB-COMMITTEE ON RADIOLOGY

John H. Gilmore, Chairman
1012 Bonita Dr., Park Ridge
Fred H. Decker
221 N. E. Glen Oak Ave., Peoria
George E. Irwin, Jr.
703 N. East St., Bloomington

L. S. Tichy
5401 Cornell Ave., Chicago
Wilson Scott
1400 Taylor Dr., Carbondale
STAFF: Walter R. Livingston

Responsibilities and Purposes

The sub-committees function under the aegis of the Medical Advisory Committee in rendering specialized advice to the staff of the Illinois Department of Public Aid. Consultation from individual members is generally sought by telephone or letter regarding services to specific patients. All matters affecting changes in policy should be coordinated with the Medical Advisory Committee.

LIAISON COMMITTEE TO ILLINOIS DEPARTMENT OF REGISTRATION AND EDUCATION (Board of Trustees)
Jacob E. Reisch, Chairman
1129 S. Second St., Springfield
H. Close Hesseltine
5841 S. Maryland Ave., Chicago
Edward A. Piszczek
6410 N. Leona Ave., Chicago
STAFF: Paul S. Swarts

Responsibilities and Purposes

This committee was formed at the request of the Director of the Department of Registration and Education of the State of Illinois, and shall consider problems of mutual concern in the area of the licensing of physicians.

LIAISON COMMITTEE TO ILLINOIS OSTEOPATHIC ASSOCIATION (Board of Trustees)
Walter C. Bornemeier, Chairman
4665 Peterson Ave., Chicago
Allison L. Burdick, Sr.
5906 W. North Ave., Chicago
Harlan English
909 N. Logan Ave., Danville
H. Close Hesseltine
5841 S. Maryland Ave., Chicago
George F. Lull
400 E. Randolph St., Chicago
Leo P. A. Sweeney
10725 S. Western Ave., Chicago
EX-OFFICIO:
John W. Neal
310 S. Michigan Ave., Chicago
STAFF: John W. Neal

Responsibilities and Purposes

The responsibilities of this committee are to assist in developing rapport, cooperation with and understanding of the osteopathic profession. It shall function when requested to do so either by (1) The American Medical Association; (2) The Illinois State Medical Society; (3) The Illinois Osteopathic Association.

Its findings in any specific instance shall be reported to either the Board of Trustees or the House of Delegates for consideration and action.

LIAISON COMMITTEE TO ILLINOIS PHARMACEUTICAL ASSOCIATION (Board of Trustees)
George B. Callahan, Chairman
4 S. Genesee St., Waukegan
George F. Lull
400 E. Randolph St., Chicago
Edward A. Piszczek
6410 N. Leona Ave., Chicago
STAFF: Robert L. Richards

Responsibilities and Purposes

The functions of this committee are to consider problems bearing on the relationship between physicians and pharmacists. A prime objective is to develop a Physicians-Pharmacists Code of Understanding and Cooperation.

ILLINOIS ASSOCIATION OF PROFESSIONS COMMITTEE (Board of Trustees)
George B. Callahan, Chairman
4 S. Genesee St., Waukegan
Charles Allison
1309 E. Court St., Kankakee
Andrew J. Brislen
6060 S. Drexel Ave., Chicago
James D. Majarakis
30 N. Michigan Ave., Chicago
Vincent C. Sarley
811 W. Wellington, Chicago
Michael R. Saxon
Oswego
EX-OFFICIO:
Edward A. Piszczek, President
Robert L. Richards
STAFF: Robert L. Richards

Responsibilities and Purposes

The responsibilities of this committee have been established by the Board of Trustees as follows: "Maintain general liaison with the officers and members of other professions . . . formally associate themselves into a body to represent the broad professions within the state . . . conduct programs and activities which will enhance the relationships among the professions . . . provide liaison with the Interprofessional Council of the State of Illinois."

JOURNAL COMMITTEE (Board of Trustees)
Jacob E. Reisch, Chairman
1129 S. 2nd St., Springfield
J. Ernest Breed
55 E. Washington St., Chicago

Newton DuPuy
1101 Maine St., Quincy
Frank J. Jirka, Jr.
1507 Keystone Ave., River Forest
Darrell H. Trumpe
St. John's Sanatarium, Springfield
STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee shall be responsible for the production of the *Illinois Medical Journal.* It shall recommend to the Board of Trustees all policies governing the editorial, business and production aspects of the Journal. It shall supervise the editor in the selection and preparation of all copy and it shall establish standards for the editorial content. It shall establish advertising policies, rates, standards and review all new accounts prior to acceptance, and approve reprint and circulation policies. It shall conduct a periodic review of the printer's contract and solicit bids as indicated. It shall establish the format, cover, type faces and general layout of the Journal.

COMMITTEE ON MATERNAL WELFARE
(Board of Trustees)
Italics indicate alternates
Robert R. Hartman, Chairman
316 W. State St., Jacksonville
Frederick H. Falls, Chairman Emeritus & Special Consultant
P.O. Box 47, River Forest
1. Richard F. Whitlock
860 Summit St., Elgin
V. M. Bowers, Jr.
2500 N. Rockton Ave., Rockford
2. William J. Farley
710 Peoria St., Peru
George E. Giffin
203 Park Ave., East, Princeton
3. Charles P. Gaetano
440 W. 170th St., Hazelcrest
Melvin Goodman
13826 Lincoln, Dolton
4. V. B. Adams
301 E. Jefferson, Macomb
Williams F. Chambers
300 E. War Memorial Dr., Peoria
5. William W. Curtis
100 W. Miller, Springfield
Donald M. Barringer
118 Walnut, Lincoln
6. Robert R. Hartman
316 W. State St., Jacksonville
Hubert L. Allen
604 E. Broadway, Alton
7. Paul Raber
149 W. King St., Decatur
James B. Waller
142 E. Prairie, Decatur
8. Ray E. Bucher
605 Logan Ave., Danville
Jack D. Brodsky
301 E. Springfield Ave., Champaign
9. Harry L. Lewis
104 S. Maple St., Benton
Donald R. Risley
319 Market St., Mt. Carmel
10. Berry V. Rife
209½ S. Main St., Anna
James B. Stotlar
Medical Arts Bldg., Pinckneyville
11. Joseph R. O'Donnell
444 Park Blvd., Glen Ellyn
John J. McLaughlin
1000 W. Jefferson St., Joliet
EX-OFFICIO:
Willard C. Scrivner
4601 State St., East St. Louis
CONSULTANTS:
John H. Rendok
Department of Public Health, Springfield
Franklin D. Yoder
Department of Public Health, Springfield
Augusta Webster
Cook County Hospital
1825 W. Harrison St., Chicago
Mila Pierce
University of Chicago
58th and Ellis, Chicago
Donaldson F. Rawlings
Department of Welfare, Springfield
STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall cooperate with the State Department of Public Health in reducing the maternal mortality rate in Illinois. As a means of achieving this goal, it shall review all maternal deaths reported and send its evaluation of the management of the case to the attending physician. In similar fashion, it shall cooperate with the Joint Committee to Study Perinatal Mortality to achieve its objectives. Appropriate measures should be taken to share the results of this research with those practitioners in a position to apply it for the benefit of their patients.

ADVISORY COMMITTEE TO MEDICAL ASSISTANTS ASSOCIATION (Board of Trustees)
Maynard Shapiro, Chairman
8911 S. Chappel Ave., Chicago
Donald E. Dick
606 S. Riverside Dr., St. Charles
Clarence G. Glenn
148 N. Edward, Decatur
Thomas R. Harwood
365 Moraine Rd., Highland Park

William G. McCarthy
13826 Lincoln St., Dolton
H. H. Pilliger, Jr.
1101 Larkin Ave., Elgin
William Scanlon
LaSalle State Bank Bldg., LaSalle
Fred L. Stuttle
1200 Hamilton Rd., Peoria
Harold Swanberg
W.C.U. Bldg., Quincy
EX-OFFICIO:
Carl E. Clark
Sycamore
Caesar Portes
25 E. Washington St., Chicago
Philip G. Thomsen
13826 Lincoln Ave., Dolton
STAFF: James Slawny

Responsibilities and Purposes

The committee shall be responsible to the Board for maintaining effective liaison between the Society and the Illinois Medical Assistants Association; it shall cooperate with county medical societies in the establishment of medical assistants associations; and shall, upon request, advise the Medical Assistants Association with respect to programs. The committee shall council with the officers and committees of the Medical Assistants Association and serve to maintain channels of communication between the two organizations at all times.

COMMITTEE ON MEDICAL ECONOMICS
(Board of Trustees)

I. E. Bartlett, Chairman
325 W. Wesley St., Wheaton
Norris L. Brookens
Carle Clinic, Urbana
Maurice M. Hoeltgen
1836 W. 87th St., Chicago
John J. Holland
511 Bondi Bldg., Galesburg
F. Paul LaFata
700 N. Seventh St., Springfield
Philip C. Lynch
1314 N. Main St., Decatur
Clifton L. Reeder
310 S. Michigan Ave., Chicago
Robert E. Schettler
824 Locust St., Red Bud
Frederick Z. White
723 N. Second St., Chilicothe
STAFF: Walter R. Livingston

Responsibilities and Purposes

By direction of the 1964 House of Delegates, the functions of the Committee on Medical Economics shall include the continuation of its efforts to make possible the fullest use of the Keogh Act authorizing the formation of medical corporations, so that corporate benefit may be utilized by the State Society members; and the continuation of the investigation of various insurance programs, including major medical and comprehensive hospital group type policies.

The committee shall continue to assist in the administration of the presently sponsored disability program by performing the adjudication services provided for in the master contract.

Matters having an economic bearing on the practice of medicine, including fact-finding and research studies in the general field of medical economics shall be brought before this committee for consideration.

MEMBERSHIP COMMITTEE (Board of Trustees)

H. Close Hesseltine, Chairman
5841 S. Maryland Ave., Chicago
W. C. Bornemeier
4665 Peterson Ave., Chicago
Casper Epsteen
25 E. Washington St., Chicago
Harold E. Himwich
Galesburg State Research Hospital, Galesburg
Joseph O'Malley
6 N. Michigan Ave., Chicago
H. D. Scott, Jr.
800 W. State St., Jacksonville
STAFF: Roland I. King

Responsibilities and Purposes

The responsibilities of this committee have been established by the Board of Trustees as follows: "to aid in any way possible all county medical societies in screening and developing membership for all ethical non-members in the various county areas. No work should be done in any county medical society without a request from the officers thereof."

COMMITTEE ON MENTAL HEALTH
(Board of Trustees)

Donald Oken, Chairman
5550 Dorchester Ave., Chicago
Arthur G. Baker
2307 Grand Ave., Waukegan
Walter H. Baer
410 Main St., Peoria
Louis D. Boshes
30 N. Michigan Ave., Chicago
Irving Frank
Sycamore
Richard J. Graff
100 Barnard Rd., Manteno
Harry D. Nesmith
Salem
Harry Phillips
7300 State St., East St. Louis

Albert Rauh
725 S. Second St., Springfield
F. L. Sullivan
3 W. Stephenson St., Freeport
CONSULTANT:
Harold M. Visotsky
160 N. LaSalle St.
AUXILIARY REPRESENTATION:
Mrs. August Martinucci
1210 Mason Ave., Joliet
STAFF: Albert G. Boeck

Responsibilities and Purposes

The responsibilities of this committee are as follows: It shall serve as a source of information on mental health matters for the ISMS. It shall evaluate available information and make recommendations to the Board of Trustees for the position the ISMS should take on issues in this area. It shall also cooperate with institutions and voluntary health agencies in disseminating information on mental health subjects to the profession and the public. It shall be on the alert for misleading or fallacious programs and information which need correcting for the protection of the public.

COMMITTEE ON NARCOTICS AND HAZARDOUS SUBSTANCES (Board of Trustees)
Ross Schlich, Chairman
Memorial Hospital, Springfield
Earl H. Blair
1836 W. 87th St., Chicago
William U. McReynolds
1101 Maine St., Quincy
Bertram B. Moss
5360 N. Lincoln Ave., Chicago
George S. Schwerin
7443 S. Exchange Ave., Chicago
Joseph S. Skom
303 E. Superior St., Chicago
David M. Slight
25 E. Washington St., Chicago
STAFF: Paul S. Swarts

Responsibilities and Purposes

The functions of this committee are: (1) study, research and dissemination of educational information on narcotics and hazardous substances to members of the medical profession;
(2) to recommend acceptable measures for the control of distribution, the use and disposal of narcotics and hazardous substances, exclusive of radiation products but including poison control;
(3) to cooperate with official and non-official agencies in all matters pertaining to this subject.

COMMITTEE ON NURSING (Board of Trustees)
W. I. Taylor, Chairman
24-28 N. Main St., Canton
Angelo P. Creticos
67 E. Madison St., Chicago
J. O. Firth
209 W. Broadway, Monmouth
Henrietta Herbolsheimer
5528 Hyde Park Blvd., Chicago
H. J. Kolb
St. Joseph
Anna A. Marcus
4458 W. Madison St., Chicago
EX-OFFICIO:
Ted LeBoy
330 Gale Ave., River Forest
W. C. Scrivner
4601 State St., East St. Louis
STAFF: Albert G. Boeck

Responsibilities and Purposes

The major objective of this committee is to establish a close professional relationship between the medical and nursing professions for the improvement of the health care of the patient. It should work with representatives of the nursing organizations to obtain sound educational programs for nurses, to improve the working relationships of the doctor and nurse in the hospital, and to help establish work patterns for nurses in the hospital which utilize the full skill of the nurse for the care of the patient. The committee should also assist in programs to recruit more graduate nurses, registered nurses, practical nurses, nurses aids and other ancillary nursing personnel.

SUB-COMMITTEE ON TECHNICAL FUNCTIONS OF NURSING
W. I. Taylor, Chairman
24-28 N. Main St., Canton
J. O. Firth
209 W. Broadway, Monmouth
Ted LeBoy
330 Gale Ave., River Forest

COMMITTEE ON NUTRITION (Board of Trustees)
Paul A. Dailey, Chairman
620 N. Main St., Carrollton
James R. Wilson, Vice Chairman
P. O. Box 70, Winnetka
Fred C. Endres
4609A Prospect Rd., Peoria Heights
John B. Hall, Jr.
329 S. Wood St., Chicago
Warner H. Newcomb
316 W. State St., Jacksonville
W. I. Taylor
24-28 N. Main St., Canton
EX-OFFICIO:
Paul R. Cannon
R. F. D. 2, Box 56, Yorkville
STAFF: Albert G. Boeck

Responsibilities and Purposes

The Committee shall serve as a source of information on nutrition matters for the ISMS and evaluate available information and make recommendations to the Board of Trustees for the position the ISMS should take on issues in this area. It shall cooperate with institutions and voluntary health agencies in disseminating information on nutrition subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

Joint Committee on Perinatal Mortality
(Board of Trustees)

Representing:

Child Health Committee
Herbert F. Philipsborn, Jr., Chairman
Box 11, Glencoe
Walter G. Steiner
140 W. Sale St., Tuscola

Maternal Welfare Committee
William W. Curtis, Co-Chairman
100 W. Miller, Springfield
Robert R. Hartman
316 W. State St., Jacksonville
Harry L. Lewis
104 S. Maple St., Benton

Illinois Society of Obstetrics and Gynecology
Paul A. Dailey
620 N. Main St., Carrollton

Illinois Chapter, American Academy of Pediatrics
Leo G. Perucca
602 W. University, Urbana

Illinois Chapter, Academy of General Practice
Simon Y. Saltman
7531 Stony Island Ave., Chicago

Illinois Department of Public Health
Donaldson F. Rawlings
511 State Office Bldg., Springfield
John H. Rendok
511 State Office Bldg., Springfield

Illinois Hospital Association
John A. Taft, Jr.
Administrator, Delnor Hospital, St. Charles

Illinois Nursing Society
Velma Foresman, R.N.
1900 W. Polk St., Chicago

Staff: Albert G. Boeck

Responsibilities and Purposes

This committee shall seek to establish a method of obtaining pertinent information on all perinatal mortality cases in Illinois; to evaluate these cases and propose a program for the reduction of perinatal deaths; to conduct an educational campaign among physicians to implement this program and to recommend such educational programs among lay groups as will contribute to the reduction of the incidence of perinatal mortality cases.

Committee on Public Affairs
(Board of Trustees)
John A. Newkirk, Chairman
370 Summit St., Elgin
Walter C. Bornemeier
4665 W. Peterson Ave., Chicago
William W. Boswell
2500 N. Rockton, Rockford
Donald E. Clark
Memorial Hospital, Springfield
Justin Fleischmann
320 S. Ela Rd., Palatine
Theodore Grevas
213 Safety Bldg., Rock Island
C. A. Hedberg
2051 N. Sedgwick, Chicago
Edwin F. Hirsch
5830 Stony Island Ave., Chicago
Paul H. Holinger
700 N. Michigan Ave., Chicago
A. Everett Joslyn, Jr.
557 Keystone Ave., River Forest
Ralph H. Kunstadter
664 N. Michigan Ave., Chicago
W. Robert Maloney
Carbondale Clinic, Carbondale
John W. Ovitz, Jr.
204 W. Elm St., Sycamore
Arthur D. Poppens
Princeton
James D. Rogers
120 Scott St., Joliet
V. P. Siegel
4601 State St., East St. Louis
Paul W. Sunderland
Gibson City
Eli Tobias
1469 E. Park Pl., Chicago
Lorin D. Whittaker
840 Jefferson Bldg., Peoria
Francis W. Young
9933 S. Western Ave., Chicago

Ex-Officio:
J. Ernest Breed
55 E. Washington St., Chicago
Frank J. Jirka, Jr.
1507 Keystone Ave., River Forest
Ted LeBoy
330 Gale Ave., River Forest
Philip G. Thomsen
13826 Lincoln Ave., Dolton

Auxiliary Representative:
Mrs. Fred C. Endres
229 E. Glen Ave., Peoria
Mrs. Wendell F. Roller
309 S. Main, Monmouth

LIAISON WITH DENTAL ASSOCIATION
Richard L. Verbic, D.D.S.
164 Division St., Elgin
STAFF: Roger N. White

Responsibilities and Purposes

The Public Affairs Committee is concerned with the political process as it pertains to medicine and public health. Within this broad context, appropriate education of the public is basic to continue health improvement in a free society. The electorate must make its wishes known to public officials.

The Public Affairs Committee shall strive to generate interest in the overall field of politics to enable the physician to participate effectively. Programs of public affairs orientation, political education, and campaign characteristics will be undertaken to increase the effectiveness of the physician in public affairs.

COMMITTEE ON QUACKERY (Board of Trustees)
Frank H. Fowler, Chairman
6356 Diversey Ave., Chicago
George F. Lull
400 E. Randolph St., Chicago
Edward A. Piszczek
6410 N. Leona Ave., Chicago
EX-OFFICIO:
Oliver Field
535 N. Dearborn St., Chicago
John W. Neal
310 S. Michigan Ave., Chicago
STAFF: John W. Neal

Responsibilities and Purposes

The Committee on Quackery shall concern itself with the illegal practice of medicine and other healing arts groups associated with unfounded claims for cure of disease. It shall cooperate with the legal authorities of the State, such as the office of the Attorney General, in providing information and witnesses for the prosecution of violators of the law. It shall cooperate with the American Medical Association's Department of Investigation, and other agencies interested in this field.

COMMITTEE ON RADIATION (Board of Trustees)
Howard C. Burkhead, Chairman
Evanston Hospital Association,
2650 Ridge Ave., Evanston
Abram H. Cannon
194 Michael John Dr., Park Ridge
Stephen L. Casper
1101 Maine St., Quincy
James A. Crilly
4601 State St., East St. Louis
Fred H. Decker
221 N. Glen Oak, Peoria
Robert W. Donnelly
812 N. Logan Ave., Danville
C. W. Weidenheim
Perry Memorial Hospital, 530 Park Ave. E.,
Princeton
Harvey White
Children's Memorial Hospital,
707 W. Fullerton Ave., Chicago
Raymond B. White
9333 S. Damen Ave., Chicago
EX-OFFICIO:
J. Ernest Breed
55 E. Washington St., Chicago
Carl E. Clark
Sycamore
CONSULTANT:
Robert S. Landauer, Ph.D.
1360 N. Lake Shore Dr., Chicago
STAFF: Albert G. Boeck

Responsibilities and Purposes

The committee shall serve as a source of information on radiation matters for ISMS and evaluate available information and make recommendations to the Board for the position ISMS should take on issues in this area. It shall cooperate with institutions and voluntary health agencies in disseminating information on radiation subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correcting for the protection of the public.

COMMITTEE ON REHABILITATION SERVICES
(Board of Trustees)
Edward L. Compere, Chairman
720 N. Michigan Ave., Chicago
Paul Richard Allyn
709 Myers Bldg., Springfield
Eli Borkon
Doctors Hospital, Carbondale
Rex O. McMorris
619 N.E. Glen Oak Ave., Peoria
Robert Dunham Moore
970 E. 59th St., Chicago
Daniel Ruge
700 N. Michigan Ave., Chicago
Howard W. Schneider
238 W. 154th St., Harvey
CONSULTANT:
Rueben R. Wasserman
820 S. Damen Ave., Chicago
EX-OFFICIO:
Frank J. Jirka
1507 Keystone Ave., River Forest
STAFF: Walter R. Livingston

Responsibilities and Purposes

The purposes of the Committee on Rehabilitation Services are to provide liaison between the Illinois State Medical Society and the Division

of Vocational Rehabilitation, the Department of Public Aid, and other official or non-official agencies which purchase rehabilitation care for patients. The committee also works closely with the Governor's Committee on Employment of the Handicapped when called upon for its advice and counsel.

The committee has been directed by the 1964 House of Delegates to:

1. Render assistance to public and private agencies in the establishment of policies regarding rehabilitation facilities to be used and selection of patients for these services;
2. Encourage the training of rehabilitation personnel, thereby promulgating high quality care;
3. Assist when possible to see that adequate medically supervised rehabilitation services be made available in all hospitals, according to the need of the hospital;
4. Compile a "Guide to Rehabilitation Facilities in Illinois, Listing Types of Disabilities Amenable to Rehabilitation."

COMMITTEE ON RELATIVE VALUE
(Board of Trustees)
C. Elliott Bell, Chairman
964 Citizens Bldg., Decatur
Walter C. Bornemeier
4665 Peterson Ave., Chicago
John F. Eggers
111 W. Elm St., Sycamore
R. Gregory Green
1355 Charles St., Rockford
Gershom K. Greening
701 N. Walnut St., Springfield
Joseph G. Gustafson
1508 Seventh Street, Moline
Franklin J. Moore
55 E. Washington St., Chicago
Max S. Sadove
840 S. Wood St., Chicago
Theodore J. Wachowski
Copley Memorial Hospital, Aurora
STAFF: Walter R. Livingston

Responsibilities and Purposes

By direction of the 1964 House of Delegates, the functions of this committee shall include the responsibility for professional education on the uses of the Relative Value Study; the distribution of the study upon request; and the revision of the Relative Value Study at appropriate intervals to keep it up to date.

COMMITTEE ON RELIGION AND MEDICINE
(Board of Trustees)
Joseph R. Mallory, Chairman
The Link Clinic, Mattoon
Charles W. Pfister
5511 N. Harlem Ave., Chicago
Paul S. Rhoads
251 E. Chicago Ave., Chicago
Hilliard M. Shair
1101 Maine St., Quincy
EX-OFFICIO:
J. Ernest Breed
55 E. Washington St., Chicago
Caesar Portes
25 E. Washington St., Chicago
AUXILIARY REPRESENTATIVE:
Mrs. Matthew E. Uznanski
2017 W. Walton St., Chicago
STAFF: James Slawny

Responsibilities and Purposes

The committee is responsible for the development of effective lines of communication between the physicians and the clergymen leading to the most effective care and treatment of the patient and his family.

RURAL HEALTH AND STUDENT LOAN FUND
(Board of Trustees)
Jack Gibbs, Chairman
143 Lawton Rd., Riverside
Thomas C. Bunting
114 S. Madison St., Pittsfield
Jacob E. Reisch
1129 S. Second St., Springfield
STAFF: James Slawny

Responsibilities and Purposes

The committee shall be responsible to the Board of Trustees in matters related to improving the standards of health in rural areas and with administration of the Student Loan Program operated jointly with the Illinois Agricultural Association. Members of the committee shall be appointed by the Board for terms of one year. The committee shall work closely with the Illinois Agricultural Association in efforts to improve the standard of health in farm areas. Also among these responsibilities is to induce physicians to practice in rural areas through the joint program with the Illinois Agricultural Association.

COMMITTEE ON SCIENTIFIC EXHIBITS
(Board of Trustees)
Coye C. Mason, Chairman
2052 N. Orleans, Chicago
Raymond Firfer
7330 Cortland, Elmwood Park
Charles P. McCartney
5841 S. Maryland Ave., Chicago
W. H. Newcomb
316 W. State St., Jacksonville

L. W. Peterson
929 Michigan Ave., Wilmette
Arkell M. Vaughn
2015 E. 79th St., Chicago
Leo M. Zimmerman
5205 Dorchester Ave., Chicago
STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee shall function with the Committee on Scientific Assembly to establish the qualifications, standards and regulations affecting scientific exhibitors at the annual convention; it shall solicit scientific exhibits of current medical interest, and select those most suitable for the ISMS convention.

ADVISORY COMMITTEE TO SECRETARIES' CONFERENCE (Board of Trustees)
Alfred A. Zanette, Chairman
5538 W. Chicago Ave., Chicago
Robert L. Tucker, Vice-Chairman
1507 N. Fourth St., Pekin
Emil R. Zidek, Secretary
129 E. Lake St., Bloomingdale
EX-OFFICIO:
Jacob E. Reisch
1129 S. Second St., Springfield
STAFF: Roland I. King

Responsibilities and Purposes

The responsibilities of this committee have been established as follows: ". . . plan and develop programs for an annual meeting of county medical society secretaries. Its duties shall include the development of procedures by which the Society's headquarters can render better and more efficient service to county societies, and county societies to their own membership."

COMMITTEE ON TUBERCULOSIS
(Board of Trustees)
Charles K. Petter, Chairman
2400 Belvidere St., Waukegan
Otto L. Bettag
326 Prospect Ave., Elmhurst
William J. Bryan
Municipal Sanitarium, Rockford
Clifton F. Hall
1517 Noble Ave., Springfield
George W. Holmes
340 W. Barry, Chicago
Charles A. Lang
209 E. Liberty Dr., Wheaton
David F. Loewen
400 W. Hay St., Decatur
George C. Turner
6627 Ponchartrain Ave., Chicago
Raymond H. Runde
2126 N. Sheridan Rd., Peoria
EX-OFFICIO:
William E. Adams
950 E. 59th St., Chicago
Edward A. Piszczek
6410 N. Leona Ave., Chicago
Darrell H. Trumpe
St. John's Sanatorium, Springfield
STAFF: Albert G. Boeck

Responsibilities and Purposes

This committee shall serve as a source of information on tuberculosis matters for the ISMS, and evaluate available information and make recommendations to the Board for the position the ISMS should take on issues in this area. It shall cooperate with institutions and voluntary health agencies in disseminating information on tuberculosis subjects to the profession and to the public. It shall be on the alert for misleading or fallacious programs and information which need correction for the protection of the public.

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY
Burtis E. Montgomery, *Chairman*, President-Elect
Edward A. Piszczek, President
William E. Adams, Chairman of the Board
EX-OFFICIO: Robert L. Richards
STAFF: Robert L. Richards

RESPONSIBILITIES AND PURPOSES

The Advisory Committee to the Woman's Auxiliary shall consist of the President-Elect as chairman, the President, the Chairman of the Board.

The committee shall provide advice and assistance to the President of the Woman's Auxiliary in her program for the year, and shall assist her in interpreting the activities of the State Medical Society to the Auxiliary members.

District Committees

FIRST DISTRICT: Carl E. Clark, Sycamore, Trustee
Counties of Boone, Carroll, DeKalb, Jo Daviess, Kane, Lake, McHenry, Ogle, Stephenson, Winnebago

	Term Expires
Ethical Relations Committee	
John H. Steinkamp, CHAIRMAN, Belvidere	1966
E. J. McKinney, 2300 N. Rockton, Rockford	1966
John W. Ovitz, Sycamore	1965
Benjamin F. Shirer, 4 W. Wilson St., Batavia	1967
Grievance Committee	
M. Mijanovich, CHAIRMAN, Marengo	1965
A. K. Matthews, 1401 E. State St., Rockford	1966
Walter J. Reedy, 814 Washington St., Waukegan	1966
Russel Zack, Medical-Dental Bldg., Rochelle	1967
Prepayment Plans & Organizations	
R. E. Whitsitt, CHAIRMAN, 5535 N. 2nd, Rockford	1966
George B. Callahan, 4 S. Genesee St., Waukegan	1967
Delbert O. Williams, Jr., Stockton	1965

SECOND DISTRICT: Ralph N. Redmond, Sterling, Trustee
Counties of Bureau, LaSalle, Lee, Livingston, Marshall, Putnam, Whiteside, Woodford

Ethical Relations Committee	
Dexter Nelson, CHAIRMAN, Princeton	1965
Ralph Bailey, Ottawa	1966
Tim Sullivan, Sterling	1967
Grievance Committee	
Edward Murphy, CHAIRMAN, Dixon	1965
Francis J. Brennan, Utica	1967
K. M. Nelson, Princeton	1966
Prepayment Plans & Organizations	
Perry V. Hartman, CHAIRMAN, Granville	1965
M. D. Burnstine, Sterling	1967
Joseph Phifer, Eureka	1966

THIRD DISTRICT: William E. Adams, J. Ernest Breed, Caesar Portes, Chicago; Frank J. Jirka, Ted LeBoy, River Forest, and Philip Thomsen, Dolton, Trustees
Cook County only.

FOURTH DISTRICT: Paul P. Youngberg, Moline, Trustee
Counties of Fulton, Hancock, Henderson, Henry, Knox, McDonough, Mercer, Peoria, Rock Island, Schuyler, Stark, Warren

	Term Expires
Ethical Relations Committee	
John Bohan, CHAIRMAN, Alexis	1965
John Bowman, Abingdon	1967
Paul M. Schmidt, Galva	1966
Grievance Committee	
V. B. Adams, CHAIRMAN, Macomb	1965
F. A. Christensen, 1st National Bank Bldg., Peoria	1966
Russell Jensen, Monmouth	1967
Prepayment Plans & Organizations	
James A. Walsh, CHAIRMAN, 405 Main St., Peoria	1965
Richard Terry, Kewanee	1967
A. W. Wellstein, Geneseo	1966

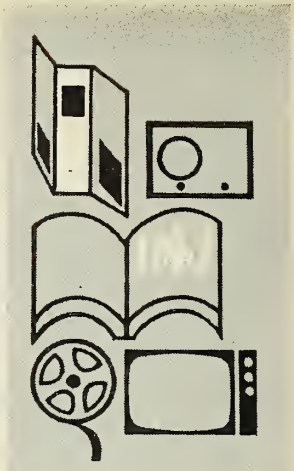
FIFTH DISTRICT: Darrell H. Trumpe, Springfield, Trustee
Counties of DeWitt, Logan, McLean, Mason, Menard, Montgomery, Sangamon, Tazewell

Ethical Relations Committee	
J. Keller Mack, CHAIRMAN, 922 S. 4th St., Springfield	1965
Arthur Conklin, 219 N. Main St., Bloomington	1967
Herman L. Meltzer, 301 W. Washington St., Clinton	1966
Grievance Committee	
H. L. Shinall, CHAIRMAN, 703 N. East St., Bloomington	1965
Clifford Draper, Hillsboro	1966
A. J. Morris, 701 N. Walnut St., Springfield	1967
Prepayment Plans & Organizations	
R. K. Taubert, CHAIRMAN, 1317 Park Ave., Pekin	1965
J. G. Meyer, Jr., 413 W. Monroe St., Springfield	1966
Robert B. Perry, 315 Broadway, Lincoln	1967

SIXTH DISTRICT: Newton DuPuy, Quincy, Trustee
Counties of Adams, Brown, Calhourn, Cass, Greene, Jersey, Macoupin, Madison, Morgan, Pike, Scott

Ethical Relations Committee	
James Rutledge, CHAIRMAN, Pittsfield	1965
Leo R. Green, 1114 Milton Rd., Alton	1966
J. Mather Pfeiffenberger, Alton	1967
Robert Piper, White Hall	1966
Grievance Committee	
George Hess, CHAIRMAN, Bunker Hill	1965
Robert R. Hartman, 316 W. State St., Jacksonville	1966
Robert C. Murphy, Quincy	1967
Prepayment Plans & Organizations	

	Term Expires
Paul A. Dailey, CHAIRMAN, 620 N. Main St., Carrollton	1965
E. C. Bone, W. State St., Jacksonville	1967
J. Richard Cooper, 1416 Maine St., Quincy	1966
Harry Mantz, 604 E. Broadway, Alton	1966
SEVENTH DISTRICT: Arthur F. Goodyear, Decatur, Trustee	
Counties of Bond, Christian, Clay, Clinton, Effingham, Fayette, Macon, Marion, Moultrie, Piatt, Shelby	
Ethical Relations Committee	
Rudolph Seigert, CHAIRMAN, Pana	1965
Kenneth Pistorius, Moweaqua	1967
E. H. Rames, Vandalia	1966
Grievance Committee	
Edgar Wier, CHAIRMAN, Altwood	1967
Boyd McCracken, Greenville	1965
William Sargent, Effingham	1966
Prepayment Plans & Organizations	
Philip Lynch, CHAIRMAN, 1315 N. Main St., Decatur	1966
Richard Larson, Shelbyville	1965
Peter Rumore, Effingham	1967
EIGHTH DISTRICT: Wm. H. Schowengerdt, Champaign, Trustee	
Counties of Champaign, Clark, Coles, Crawford, Cumberland, Douglas, Edgar, Jasper, Lawrence, Richland, Vermilion	
Ethical Relations Committee	
Myron I. Boylson, CHAIRMAN, 403 S. Court, Tuscola	1967
E. A. Fahnestock, Bridgeport	1966
Mack W. Hollowell, 35 Circle Dr., Charleston	1965
Grievance Committee	
L. M. T. Stilwell, CHAIRMAN, 510 E. Daniel, Champaign	1966
A. R. Brandenberger, 605 N. Logan Ave., Danville	1965
Gordon Sprague, Shaw Ave., Paris	1967
Prepayment Plans & Organizations	
E. A. Kendall, CHAIRMAN, Mattoon	1967
N. L. Brookens, 602 W. University Ave., Urbana	1966
James W. Landis, Olney	1965
George T. Mitchell, 116 S. 5th St., Marshall	1966
NINTH DISTRICT: Charles K. Wells, Mt. Vernon, Trustee	
Counties of Edwards, Franklin, Gallatin, Hamilton, Hardin, Jefferson, Johnson, Massac, Pope, Saline, Wabash, Wayne, White, Williamson	
Ethical Relations Committee	
G. R. Johnson, CHAIRMAN Harrisburg	1965
John P. Pope, Benton	1966
N. A. Thompson, Eldorado	1967
Grievance Committee	
C. L. Jannings, CHAIRMAN, Fairfield	1967
Herbert Fine, Carterville	1966
Wm. G. Parker, Mt. Vernon	1965
Prepayment Plans & Organizations	
Denton Ferrell, CHAIRMAN, Eldorado	1965
H. L. Lewis, Benton	1967
E. A. Veach, Vienna	1966
TENTH DISTRICT: Willard C. Scrivner, East St. Louis, Trustee	
Counties of Alexander, Jackson, Monroe, Perry, Pulaski, Randolph, St. Clair, Union, Washington	
Ethical Relations Committee	
Wm. H. Walton, CHAIRMAN, 109 S. High St., Belleville	1965
William Borgsmiller, Murphysboro	1966
A. L. Robinson, Mounds	1967
Grievance Committee	
William H. Whiting, CHAIRMAN Anna	1965
R. E. Matlavish, DuQuoin	1967
Earl Wheeler, Belleville (after Nov. 1, 1964)	1966
J. E. Wheeler, 110 N. High St., Belleville (until Nov. 1, 1964)	1966
Prepayment Plans & Organizations	
R. E. Schettler, CHAIRMAN, Red Bud	1965
R. W. Jost, 107 E. 4th St., Waterloo	1966
James A. Weatherly, Murphysboro	1967
ELEVENTH DISTRICT: Bernard Klein, Joliet, Trustee	
Counties of DuPage, Ford, Grundy, Iroquois, Kankakee, Kendall, Will	
Ethical Relations Committee	
P. W. Sunderland, CHAIRMAN, 214 N. Sangamon, Gibson City	1966
J. R. O'Donnell, 444 Park Ave., Glen Ellyn	1965
Leonard F. Roblee, Lockport	1967
Grievance Committee	
Morgan M. Meyer, CHAIRMAN, Lombard	1967
I. E. Bartlett, 325 W. Wesley, Wheaton	1966
R. Kent Swedlund, Watseka	1965
Prepayment Plans & Organizations	
M. R. Saxon, CHAIRMAN, Oswego	1965
Charles Allison, 1309 E. Court St., Kankakee	1966
J. B. Schweitzer, 715 Lake St., Oak Park	1966
George Woodruff, 250 N. Ottawa, Joliet	1967



ISMS SERVICES

Pursuit of Obligations

PURPOSES OF THE ILLINOIS STATE MEDICAL SOCIETY ARE:

- to promote the science and art of medicine
- to protect the public health
- to elevate the standards of medical education
- to unite the medical profession behind these purposes, and
- to unite with similar organizations in other states and territories of the United States to form the American Medical Association

The Society shall inform the public and the profession concerning the advancements in medical science and the advantages of proper medical care.

To fulfill these purposes, the Society maintains a headquarters office at 360 N. Michigan Ave., Chicago, and an office in Springfield at 520 S. Sixth St. Services of the Society, under the general supervision of Robert L. Richards, Executive Administrator, are conducted by the following divisions, each of which is headed by a staff director:

Administration; Business Services; Economics and Insurance; Legislation and Public Affairs, and Publications and Scientific Services.

Many and varied are the activities of the Society in pursuit of its obligations. Some of these activities are major programs of statewide (and sometimes national) interest for all citizens; others are of special interest to doctors, and still others are sponsored for specific groups or individuals.

Following are descriptions of the Society's divisions and the programs, services and publications available directly to Society members or sponsored for their benefit.

Division of Administration

The Executive Administrator has the responsibility and the authority to provide for the smooth and efficient functioning of the Illinois State Medical Society.

The implementation of established policy, fiscal and budgetary matters; the employment of qualified personnel and the development and maintenance of personnel policies are all part of the Administrator's activities.

In order to provide the membership of the Society with the best professional staff services available, headquarters office has been set up by various divisions. The Division of Administration (which the Administrator directs personally) provides many important functions.

This Division develops liaison with the Board of Trustees and serves the chairman in carrying out his duties. It works closely with the speaker of the House of Delegates and the officers of the Society to provide a smooth and efficient atmosphere in which the House may function.

The controlling factor in all these areas is the Constitution and Bylaws. Cooperation is maintained with the Committee on Constitution and Bylaws to present to the House all suggested changes for official action.

The Division, through the Administrator, channels all legal inquiries and works with the General Legal Counsel and the Special Legal Counsel to provide guidance to the officers, trustees, committee chairmen and county medical society officers.

The duties and powers of the Executive Administrator are of utmost importance, and are outlined in the Bylaws of the Society.

Division of Business Services

Just as the entire staff of the Illinois State Medical Society exists to serve the needs of more than 10,000 members, the Division of Business Services exists to serve the needs of the other staff divisions. Specifically, all mail room, printing, duplicating, and central-supply services are provided by this division.

Membership Records

Membership records are maintained so that quick access may be had to correct information concerning the basic membership history of each of our members. In addition, forms to obtain dues, address changes and other necessary information are designed and supplied to each county society secretary for their use.

The Committees on Membership and the Annual Secretaries' Conference are assigned to this division for the staff services which might be required. The Committee on Membership has been dealing with the on-going problem of sound membership development. The Advisory Committee to the Annual Secretaries' Conference has the responsibility for developing an enlightening program which will help county secretaries find better ways to serve both the public and their county society membership more effectively.

Accounting and Budget

Responsibility for providing safekeeping and proper accounting for all money and securities of the Society rests with this division, upon the direction and guidance of the Board of Trustees Finance Committee, the Secretary-Treasurer, and the Executive Administrator. Assistance is offered to all interested staff and officers in the interpretation of the division's regular and special accounting and budgetary reports.

Liaison with outside agencies in regard to matters affecting the finances of the Society is a prime responsibility of this division; the Internal Revenue Service, the Society's banking and investment agencies, office building rental agent, and the American Medical Association are major examples.

Insurance Coverage

Provision for and maintenance of the Society's property, liability, and employee insurance coverage is handled within this division, so that legal and financial requirements are satisfied at the most economical premium cost. In this area of responsibility, the assistance and cooperation of the Division of Economics and Insurance is utilized in order that best results for the Society may be obtained.

Standardization of office procedures and systems in order to reduce the cost and raise the efficiency of the office operation is a continuing assignment for the division. Assistance in personnel recruitment, job analysis, and salary range administration is provided the Executive Administrator and other division directors.

Division of Economics and Insurance

The Division of Economics and Insurance is responsible for supplying a wide variety of information on economic topics and insurance data to members of the Illinois State Medical Society. The division is frequently called upon to prepare speeches, write and publish pamphlets and other materials and make them available for distribution on such subjects as Kerr-Mills medical care in Illinois, the King-Anderson approach to medical care financing through social security, and physician retirement programs.

The division, so far as it is possible to do so, designs and directs research in the area of economics. Such projects have included the Relative Value Survey and the social security poll.

Reference Library

A library providing a reference source for membership and staff use is maintained. Information is available on the cost of medical care; foreign medical care systems, needs and wants of the aged, their medical care, housing, health,

finances and employment; and the social security system, its benefits, costs, financing, and coverage.

The division also provides information on matters pertaining to insurance and retirement plans for the members of the state medical society and administrative staff. Periodically information is prepared for physicians and the public pertaining to such medical care programs as Assistance to the Medically Indigent Aged, Old Age Assistance, Aid to the Medically Indigent, and the Military Dependents' Medical Care (Medicare).

Public Aid Liaison

Familiarity with the medical care programs of the Illinois Department of Public Aid and liaison with the staff of the department is another responsibility of the division. Liaison is also maintained with public and private agencies interested in the fields of aging, insurance, hospitals, and rehabilitation.

The division provides staff services to committees involved in economics, aging, insurance, hospitals, medical care programs through public aid, state and government programs of medical care, and the accreditation of hospitals and nursing homes.

Division of Legislation & Public Affairs

As the state of the public's health is the prime concern of the medical profession, all Illinois and U.S. legislative actions which affect physicians and other members of the healing arts are thoroughly studied by the division to insure that the best interests of the public and the medical profession are served.

Surveillance of Legislature

The ISMS Legislative Committee acts as the clearing house for legislative proposals generated by specialized committees of ISMS and produced by allied groups or others. The division, with its special legislative representative, maintains on-the-spot surveillance when the legislature is in session. Upon appropriate consideration and approval, bills of medical significance in the state legislature are either supported or opposed to achieve optimum public health conditions. Similar action is taken with respect to bills in Congress when they are of special significance to Illinois physicians. This activity is conducted in conjunction with the American Medical Association.

Public Affairs Program

Integrated with, and designed to supplement the legislative activity is the new Public Affairs Program. This program, implemented by the division, as directed by the ISMS Public Affairs Committee, strives to alert the physician to his role in public affairs to encourage effective participation in the public affairs of his community, state, and nation.

Medical-Legal Activities

The division also performs medical-legal activities common to the program assigned. One of these activities is the administration of the Impartial Medical Testimony program. This program, operating in conjunction with the Supreme Court of Illinois, provides the services of impartial medical examiners, as ordered by the courts in personal injury cases.

Other areas of medical-legal interaction are explored and problems resolved through liaison with the judiciary and the bar associations.

Committee Responsibilities

In addition to the foregoing, special programs and activities of the Archives Committee, Benevolence Committee, Committee on Occupational Health, and Committee on Narcotics and Hazardous Substances; Advisory Committee to the Department of Registration and Education, and the Committee on Laboratory Evaluation, are administered.

Division of Public Relations

The Public Relations Division normally serves as the Society's source of information, or news outlet, to the lay press, radio and television. With increasing frequency, the division is contacted by news reporters, science writers and authors seeking to verify the accuracy of a report. Its counseling services on public relations and publicity are available to any county medical society.

A mailing list of all newspapers, radio and television stations in Illinois is maintained by the division. The list is so arranged that news releases may be addressed to individual counties, and county society secretaries may avail themselves of this service.

News releases for county societies are automatically prepared by the division staff and distributed to all news outlets in the particular county whenever a county society makes use of the ISMS postgraduate education program. Other than this, the state society's staff does not prepare news releases of county society activities unless this service is specifically requested.

Health Columns for Newspapers

Currently, ISMS presents a weekly public service health column entitled "Dr. 'SIMS' Says: Safeguard Your Health." This column, offered to the 650 newspapers in Illinois, carries a new logotype of Dr. "SIMS" which readily identifies the column with the Illinois State Medical Society. The division would appreciate hearing from members in areas where the column is not appearing.

Outdoor Billboards

This year ISMS became the first medical society to present health messages on outdoor billboards. These messages, stressing prevention of such diseases as tetanus, measles, polio, etc., were scheduled to be posted in July and, with monthly changes, run for a full year. Members are asked to notify the Society of areas where these outdoor messages are not appearing.

Pamphlets Available

As a vital part of the continuing "positive public relations" programs of the ISMS, pamphlets on a variety of health subjects are available to the county medical societies for the asking. Doctors should have these pamphlets in their waiting rooms. Attractive pamphlet racks with literature are available at a cost of only one dollar each by writing to this division.

Other materials available from the Public Relations Division are described on the following pages. These materials include exhibits, radio-television programs, disaster hospital manuals, medical career recruitment materials, speakers' bureau information, and films.

Committees of the Society serviced by the Public Relations Division are Disaster Medical Care, Ethical Relations, Fifty-Year Club, Grievance, Medicine and Religion, Medical Assistants, Public Relations, Public Safety, Rural Health and Student Loan Fund, and the Advisory Committee to Student AMA Chapters.

Division of Publications and Scientific Services

All publications of the Society, including the *Illinois Medical Journal,* are produced through this division. The Journal, the official publication of the Society, is mailed monthly to all members, who are urged to read it to keep abreast of the scientific, economic, political, legal and social developments within the state. The editor welcomes suggestions for articles which may be of special interest to members.

Committee Responsibilities

Services to 19 scientific committees are provided by this division. These committees, made up of physicians, provide guidance to the Board of Trustees and House of Delegates in areas of special medical interest. They make recommendations for policy and programs involved in cancer, cardiovascular disease, eye health, environmental health, child health, mental health, nursing, nutrition, radiation safety, medical education and tuberculosis. Others study the problem of maternal welfare and perinatal mortality in cooperation with the State Department of Public Health.

Staff members of the division coordinate and implement the activities of the Committee on Continuing Education to provide scientific programs for district and county medical society meetings.

Annual Convention

Similarly, the staff serves as an arm of the Committee on Scientific Assembly to arrange and produce the annual convention of ISMS. Held in May in Chicago each year, the convention offers scientific meetings and exhibits as well as sessions of the House of Delegates.

A new function of the division is to administer the affairs of the Educational and Scientific Foundation, a non-profit organization established to conduct educational and scientific projects related to medicine. It handles the administrative funds of the Impartial Medical Testimony Program and has conducted several projects for other organizations. Physicians are invited to become Fellows of the Foundation for a charter membership of $100.

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Exhibits for the Public

The ISMS Public Relations Division has two large exhibits available to county societies for public display. No charge is made for the use of these exhibits, other than the customary transportation costs. Descriptions and suggestions for use of these exhibits may be obtained by writing the Society.

The American Medical Association has a large number of exhibits available to county societies for agricultural fairs, health fairs and other public gatherings. A catalogue of exhibits is available upon request from the AMA, 535 N. Dearborn St., Chicago.

Radio-TV Public Service Materials

Radio materials available from the Illinois State Medical Society include:

1) "Today's Health Tip"—a new 30-second health message every day. Available on records (30 messages per record) which feature the voice of Dr. "SIMS." For added local appeal, scripts are also available which can be read by local announcer or physician.
2) "Medical Interview" — a five minute weekly interview series featuring a different doctor each week, discussing subjects on practical health matters in language the layman can understand.

Television materials currently include a one-minute animated spot on the subject of measles. Subsequent spots stressing preventive medicine are currently in the process of production.

In addition, the Division of Public Relations maintains a radio and television speakers' bureau, which obtains physician-speakers for radio and television interview shows on request.

County Medical Society Speakers' Bureau

The Illinois State Medical Society recognizes that one of the prime responsibilities of the medical profession is to maintain and improve good relations with the public. For that reason it encourages county medical societies to set up speakers' bureaus to supply physican speakers to interested lay groups in the area.

The Public Relations Division of ISMS has prepared a comprehensive instructional guide entitled, "How to Set Up a Speakers' Bureau," to help county societies communicate with the public. The booklet, available from the Society without charge, includes information on speakers' rosters, suggested audiences, and publicity helps.

Medical Self-Help Training Program

The Disaster Medical Care Committee of the Illinois State Medical Society strongly endorses the training of at least one person in each family on procedures to follow in the event of a medical emergency. This would be of value not only in the event of an atomic disaster, when physicians would not be available, but also in caring for other emergencies until the help of a physician can be obtained.

For this reason the Society presented "Medical Self Help Training" as an official television course over educational Channel 11 in Chicago early in 1964. Over 10,000 persons enrolled in this course. Response was so enthusiastic that films of the complete 15-part, 7½-hour series have been made available to county medical societies, industries, schools, and television stations throughout the state.

For complete information on this film course, as well as a "live" course for group study presentations, write the Public Relations Division of the state society.

Medicine-Religion Film

The newly formed ISMS Committee on Medicine and Religion has produced a 12-minute color film entitled "Not By Bread Alone." The film, which demonstrates the serious consequences of physicians and clergymen not working together, is intended to stimulate the formation of medicine-religion committees at the county level.

A copy of the film has been sent to each county medical society in the state. Additional copies for showing by other groups are available from ISMS.

Stroke—Early Restorative Measures in Your Hospital

A new film, entitled "Stroke—Early Restorative Measures in Your Hospital," has been produced by the ISMS Committee on Aging and is now available from the Society.

Directed toward physicians in all general hospitals, regardless of size, the film illustrates simple and effective methods and devices used in the rehabilitation of stroke patients. It emphasizes the procedures to be instituted immediately upon the patient's admission to the hospital.

Primary purpose of the film is to inform physicians and nurses of the need for immediate action in stroke cases and to interest them in acquiring additional details for treatment through available publications or study courses.

The 20-minute color film illustrates a program of constructive rehabilitation which progresses through three stages: (1) proper positioning, (2) transfer activities and early ambulation, and (3) training for self-care. It indicates how these major steps can be conducted in any hospital, however small, by an interested nurse using a minimum of equipment.

The film may be obtained from the Society on a loan basis for viewing without charge or may be purchased for $125.

Disaster Hospital Manual

The responsibility of providing immediate medical and hospital care in disasters of any magnitude falls directly on physicians, nurses and hospitals. To aid Illinois communities in developing disaster plans, the ISMS Committee on Disaster Medical Care has adopted a model emergency plan for hospitals.

Originally developed by the Memorial Hospital of DuPage County, Elmhurst, the plan is recognized as a model by the Office of Defense Mobilization in Washington, D. C. Copies are available from the Society.

Illinois Medical Journal Reference Pages

Following is an index to reference material available from the Illinois State Medical Society. The information was originally published in the Illinois Medical Journal from which it could be detached for binding. Single copies of each will be sent free to Illinois doctors upon request. A nominal charge will be made to cover the handling of multiple copies or sets of the reference pages.

Some of the subjects of this index are covered in Section III (Legislative and Medical Service Organizations and Section IV (Medical-Legal Information).

1. **Notifiable Disease List—the Rules and Regulations for the Control of Communicable Diseases**
   Free Vaccines
   Free Drugs
2. **Approved Resources for Postlaryngectomy Speech Training**
3. **Poison Control Centers**
4. **Services Available to the Acoustically Handicapped**
5. **Desirable Weights for Men and Women**
6. **Leukemia Centers**
7. **Rehabilitation Centers**
8. **Illinois Aids for the Blind**
9. **Cytology**
10. **Facilities for the Detection of Tuberculosis in Illinois**
11. **Treatment Facilities for Alcoholics in Illinois**
12. **Facilities for Psychiatric Therapy**
13. **Homemaker Service**
14. **Facilities for Mentally Retarded Children**
15. **Blood Transfusion Service**
16. **Vocational Rehabilitation Services**
17. **Schools of Nursing**
18. **Facilities for Unmarried Mothers**
19. **Camps for the Handicapped**
20. **Illinois Approved Schools of Medical Technology**
21. **Sources for Educational Scholarships**
22. **Registries of the American Registry of Pathology**
23. **Illinois Institutions Caring for Rheumatic Fever Patients**
24. **State Approved Agencies for Adoptive Placement**
25. **Adoption Laws in Illinois**
26. **Schedule for Routine Immunization of Infants and Children**
27. **Skin Test Materials**
28. **State Licensed Nursing Homes in Illinois (Cook County)**
29. **State Licensed Nursing Homes in Illinois (Exclusive of Cook County) (Adams through McHenry Counties)**
30. **State Licensed Nursing Homes in Illinois (Exclusive of Cook County) (McLean through Woodford Counties)**
31. **Normal Laboratory Values of Clinical Importance—Part 1 (Blood—Chemical Constituents; Hematologic Examinations)**
32. **Normal Laboratory Values of Clinical Importance—Part 2 (Functional Tests)**
33. **Normal Laboratory Values of Clinical Importance—Part 3 (Bone Marrow; Urine; Stool; Cerebrospinal Fluid)**
34. **Guide to Resources for Neurological Disorders**
35. **Highlights of Illinois State Radiation Protection Law**
36. **Illinois Medical Assistants**
37. **Poisons and Antidotes—Part I**
38. **Poisons and Antidotes—Part II**
39. **See Chicago During Your Convention Stay**
40. **Sightseers Map of Chicago**
41. **Pollination Calendars**
42. **Willing The Body to Medicine—Part I**
43. **Willing The Body to Medicine—Part II**

Impartial Medical Testimony

The Impartial Medical Testimony program, in which the Illinois State Medical Society participates, is designed to elicit objective medical truth and facilitate the equitable disposition of personal injury cases in the courts of Illinois.

As a technique of judicial administration, impartial medical testimony examiners are ordered by the court when there is evidence of a wide divergence of medical opinion in the personal injury which is subject to litigation. The introduction of the IMT examiner and subsequent examination of injuries provide the court with objective, impartial medical data for use in pre-trial conferences and in jury trials.

Authorization for the use of IMT examiners was established by the introduction of Illinois Supreme Court Rule 17-2 in September 1961. The Rule states, "When in the discretion of a trial court, it appears that an impartial medical examination will materially aid in the just determination of a personal injury case, the court, a reasonable time in advance of the trial, may on its own motion or that of any party, order a physical or mental examination of the party whose mental or physical condition is an issue. The examination shall be made without cost to the parties by a member or members of a panel of physicians chosen for their special qualifications by the Illinois State Medical Society. The court administrator and deputy court administrator are charged with the administration of this Rule.

"A copy of the report of examination shall be given to the court and to the attorneys for the parties. Should the court at any time during the trial find that compelling considerations make it advisable to have an examination and a report at that time, the court may, at its discretion so order. Either party or the court may call the examining physician or physicians to testify, also without cost to the parties. Any physician so called shall be subject to cross-examination.

The court shall determine the compensation of the physician or physicians."

Illinois is distinguished in this matter by being the only state which has a court rule permitting the state-wide use of impartial medical testimony. The Illinois State Medical Society played a significant role in the creation and development of the IMT program. Impartial medical testimony in other states is limited to certain jurisdictions within the states.

To implement the IMT rule, the Illinois State Medical Society created a panel of impartial medical examiners. This panel is comprised of approximately 400 physicians who are grouped into 20 medical specialties. These IMT examiners were selected from approximately 4000 nominated physicians. Composition of the panel is reviewed annually to maintain the highest standards for the courts of Illinois. The IMT examiners are selected from the panel in rotating sequence.

The IMT examiners are paid, on court approval of bills submitted, by the Illinois State Bar Association Foundation, which is the custodian and disbursing agent of a special IMT fund. This fund was made possible by grants from the Ford, Wieboldt, Deere, Woods, and Lilly Foundations.

In a personal injury case, the plan evolves as follows:

1) judge invokes Rule 17-2 (when in his judgment introduction of an IMT examiner will aid materially in the equitable disposition of the case);
2) judge contacts supreme court administrator, requesting IMT examiner (special forms are used for this purpose);
3) court administrator contacts Illinois State Medical Society for IMT examiner, as required by the character of the personal injury;
4) ISMS selects an IMT examiner from the panel of the medical specialty relating to the injury involved;
5) ISMS relates the identity of the IMT examiner to the court administrator;
6) court administrator schedules the examination of the plaintiff, and obtains pertinent medical records for the IMT examiner.
7) IMT physician examines plaintiff, and prepares medical report. This report is submitted to the court. Copies are prepared for the attorneys involved.
8) IMT examiner is available for court testimony, as required.
9) IMT examiner submits bill to the court.
10) the IBA Foundation disburses funds to pay for the IMT examiner.

The Illinois State Medical Society is deeply appreciative of its role in offering, in conjunction with the Supreme Court, this impartial medical service for the courts of Illinois. The IMT Committee of the state society is charged with the responsibility of implementing the IMT Rule, as required by the court.

New . . . Tax Saving Plans for Self-Employed

Physicians and other professional persons have had the opportunity of setting aside tax-deferred retirement contributions since Jan. 1, 1963, following passage of the Self-Employed Individuals Act of 1962.

The act and its provisions are described in "New . . . Tax Saving Plans for Self-Employed," a booklet available from the Illinois State Medical Society. Included in the booklet are specifications for the retirement plan which must be filed with the Internal Revenue Service in order for the physician to secure favorable tax treatment.

A variety of master or prototype retirement plans are available, under which a physician may enroll by executing certain standardized documents. Usually, such plans have received prior IRS approval and bear an approval date and identifying number. This assures the physician that the plan in which he enrolls will provide the desired tax benefits. A physician may develop his own individual retirement plan through a bank, insurance company, or other funding media. Such plans, of course, must meet IRS requirements and be qualified with IRS. Competent legal and tax advice should be sought in the drafting of any individual plan.

The Illinois State Medical Society does not offer a master or prototype plan, although such plans are being considered, but such plans are available through the American Medical Association and certain specialty societies. Other plans may be obtained through insurance companies, banks and mutual funds.

Group Disability Program

The Illinois State Medical Society has officially approved a group disability program which is available to all eligible members of the ISMS up to age 70 who are regularly attending all of the usual duties of their occupation. Three different types of coverage are available under the program, with an over-70 conversion privilege.

Benefits of the program are payable regardless of any other insurance and no restrictive riders may be attached. The master contract contains a special renewal condition whereby the individual coverage cannot be terminated.

Provision has been made for an adjudication committee to advise the carrier on claims and other administrative problems. The adjudication committee will review the medical data and make recommendations regarding coverage which the insurance company might otherwise reject.

The program is explained in detail in a brochure which is available from the Society or by writing directly to Parker, Aleshire & Co., 9933 Lawler Ave., Skokie.

Major Hospital and Nurse Expense Insurance

A $15,000 major hospital and nurse expense insurance policy is now available to members of the Illinois State Medical Society.

The program, not officially sponsored by the Society, covers the following expenses incurred during a hospital confinement:

Up to $30 per day for room and board, laboratory tests, operating room charges, and the costs of anesthetics, x-ray examinations or treatments, drugs and dressings, and therapeutic services and supplies.

It also includes the cost of employing full-time registered nurses or licensed practical nurses (other than a member of the insured's family) during a hospital confinement; dental expense incurred in or out of the hospital as a result of injury to natural teeth, and ambulance expense up to 100 miles.

The Commercial Insurance Company of Newark, N. J., will pay up to $15,000 for each individual insured for covered expenses incurred within two years from the date such expenses first began for any one continuous period of treatment. Payment is made on the basis of 80% of all covered expenses excluding the initial $300 or $500 whichever was the deductible elected at time of application. In the event of a contagious disease involving more than one covered family member within 30 days or in the event of a common accident involving more than one covered family member, only one deductible of either $300 or $500 will apply.

Any member under 70 years of age actively engaged in his profession or occupation is entitled to enroll. He may enroll as an individual or include his eligible dependents. Eligible dependents are the spouse and the unmarried dependent children over 14 days and under 23 years of age. After a policy is in force all new born children are automatically covered without premium charge on the 15th day after birth, but on the next following renewal date continuation of insurance on the new born child shall be subject to the required additional premium if any.

All applicants are subject to acceptance by the company. Additional information may be obtained by writing the Society or Parker, Aleshire & Co.

The Relative Value Study

The Relative Value Study, undertaken by the Relative Value Committee, was completed, printed, submitted to and approved by the ISMS House of Delegates in 1964. Copies of the study are available from the Society. The study is a compilation of unit values referred to as relative value indexes, and derived from average fees customarily charged by Illinois physicians for services rendered to patients.

The primary purpose of the Relative Value Study is to provide individual physicians with a reliable factual guide for evaluating their own services. It may also be utilized by the profession as a whole in developing and negotiating payment schedules designed to fit a wide range of circumstances. In this respect, the advantages accruing to the profession are numerous since many existing payment schedules are based on subjective opinion with few or no statistical guidelines.

The 1961 House of Delegates authorized the study and approved it with modifications at the 1963 annual meeting. The statistical techniques employed in this study, the data resulting therefrom, the wealth of information contained in the study itself and its adaptability make the study superior to similar studies previously undertaken.

Medical Career Recruitment Programs

As man has advanced his life expectancy, it follows that many additional young men and women are and will be needed as members of the health team. Youth must be counseled early in their academic years in order to receive the proper educational background for a doctorate of medicine or allied health field degree.

The Woman's Auxiliary of the ISMS has been the spearhead force in Illinois to interest and recruit the youth of the state in medical careers. Members are asked to aid this effort by investigating the possibility of conducting or participating in career days in their home communities.

A pamphlet entitled "The Opportunities and Rewards of Medicine Can Be Yours" and a "Career Information Form" are available from the society.

Assistance to the Medically Indigent Aged Through Kerr-Mills

Assistance to the Medically Indigent Aged (AMIA) is a program enacted in Illinois to help elderly citizens on limited income and resources pay their medical and hospital bills and enjoy their golden years in good health. Kerr-Mills is paid for by state and federal funds and administered on the local level to assure health care when serious illness strikes and finances of the aged are low.

It provides hospitalization with all drugs, laboratory tests, special treatments, nursing and other essential services for the duration of the hospital stay; follow-up care after release from the hospital, with physician's visits and prescribed drugs for 30 days; and convalescent or rehabilitation care in a nursing home after release from the hospital, for 90 days, together with the services of a physician and necessary drugs.

Applicants for medical assistance under Kerr-Mills must be 65 years of age or older and must be residents of Illinois, having established a permanent home in the state at the time of application. There is no durational residence requirement and temporary absence does not affect the resident status. The annual income of a single person with no dependents should not exceed $1,800; a couple is allowed $2,400 plus $600 for each additional dependent. Property and other resources for a single person should not exceed $1,800; a married couple is allowed $2,400 plus $400 for each dependent. Property and other resources mean "liquid or marketable assets," exclusive of the applicant's homestead and contiguous real estate; clothing, household effects, and automobiles; life insurance having a *cash* value of $1,000 or less; tangible personal property used in earning income having a fair market value of $1,000 or less.

If the applicant is able to meet these requirements, he is probably eligible for Kerr-Mills assistance. If his income or resources exceed these amounts, he may still be eligible after first applying the excess toward the medical costs. The amount of medical expenses for which the applicant is responsible is based on income and the value of resources.

Family responsibility (sons and daughters) is part of the Illinois law; the County Department of Public Aid determines if the responsible relatives are financially able to meet the cost of the allowable medical services. The amount of aid will vary according to their financial situation.

Application should be made prior to or during the hospital stay. Payment will not be allowed if application is made following release from the hospital. Application should be made to the County Department of Public Aid in county where the patient resides.

Brochures on Kerr-Mills are available upon request to the state medical society. For the physician, there is a booklet entitled "Doctor's Guide to Kerr-Mills," and for the general public, a pamphlet, "Need Help When You're Ill? Here's How Kerr-Mills Pays the Bill." These brochures are available in any quantity requested.

Comb-1 Insurance Form

Because of the variety of data required for health insurance claims, the Comb-1 Form was developed through the joint cooperation of the American Medical Association and the Health Insurance Council. Efforts were directed to simplify and reduce the number of attending physicians forms to a degree equally acceptable to the health insurance industry and the medical profession.

Information requested by many diverse forms from a large number of insurance companies was first classified and minimum needs for claim purposes were determined. Then appropriate and clearly worded questions were developed and arranged in a standard sequence, to facilitate completion. Out of this came two basic forms, one for group health insurance and one for individual health insurance, and four abbreviated forms. A further simplification involved devising an all-purpose form which is a combination of the group and individual forms—the Comb-1 Simplified Health Insurance Claim Form.

These forms are being distributed to physicians by the Illinois State Medical Society with the request that they be substituted for any non-standardized forms received. Each physician has been asked to voluntarily adopt the following procedure:

1) When a physician receives a form from an insurance company bearing the HIC symbol it should be completed and returned to the company.
2) When a physician receives a form *not* identified by the HIC symbol, the standardized form should be filled out and clipped to the unacceptable form with both forms returned to the insurance company.
3) If the insurance company insists upon having its own form completed, the doctor should feel justified in making a reasonable charge for the added work involved in handling the non-standardized form.

The attempt to standardize these forms is an aid in cutting back on the ever-increasing load of paper work involved in medical practice. Forms are available without charge from the ISMS Division of Economics and Insurance, while the supply lasts.

Physicians Placement & Student Loan Fund Program

The Illinois State Medical Society not only offers help to students who wish to become physicians, but also is able to assist the careers of those already licensed to practice medicine.

The society provides this aid through two special activities. First is its own Physicians Placement Service. Second is the Illinois Student Medical Loan Fund Program that the society sponsors in conjunction with the Illinois Agricultural Association.

Physicians Placement Service

The Physicians Placement Service is designed to help physicians find a desirable area in which to establish practice or to relocate. The program's purpose is twofold, since it is interested also in helping those communities which demonstrate need of a resident physician.

More than 400 medical doctors have been placed through this program since its inception shortly after World War II.

The Physicians Placement Service maintains an up-to-date listing of some 150 "open" areas needing general practitioners. It maintains a

similar listing of areas in need of specialists in a given field.

This service accepts requests from both physicians and communities for satisfactory placement. In addition, physicians are referred to the service by a number of organizations, among them the American Medical Association, the Illinois State Health Department and the Illinois Agricultural Association. Frequently, responsible citizens or overburdened physicians in a community will contact the service.

Another important function of the Physicians Placement Service is to assist small communities in developing programs to attract physicians.

The Physicians Placement Service sends a questionnaire to the applicant physician to obtain information on his educational background, his interests and preferences of type of practice. Upon return of the questionnaire, the physician is sent a complete list of openings. Each opening is detailed on its facilities for home life, office space, proximity to hospital facilities and other specifics. The physician is also sent bulletins with information on new locations as they develop.

The Physicians Placement Service offers its assistance to all qualified physicians who request it. An applicant need not be a member of the state medical society. There is no charge either to the physician nor to the community seeking the services of this program.

Inquiries may be addressed to the Physicians Placement Service, Illinois State Medical Society, 360 N. Michigan Avenue, Chicago, Illinois, 60601.

Illinois Student Medical Loan Fund Program

The Illinois Student Medical Loan Fund Program is designed to help those who have got what it takes to become a physician but lack the money or a recommendation for medical school. Since its inception in 1948, the program has helped over 125 qualified applicants to hurdle financial or borderline academic barriers to a medical education.

Loans to students in need are provided by joint contributions from the Illinois State Medical Society and the Illinois Agricultural Association. The program offers loans of $625 per semester—up to a total of $5,000 over a four-year period. A two per cent interest rate is charged semi-annually from the time the loan is received. The borrower must also insure himself for the entire amount of the loan and pay premiums on the policy. However, he has seven years—time to complete his education, internship and two years of practice—before the first principal payment is due.

The program also offers assistance to those who may not have financial difficulties but can't get into a "Class A" medical school because their college grades are marginal. The board representing the sponsoring organizations of the program can recommend 10 candidates annually to the University of Illinois Medical School in Chicago. After careful screening to determine whether the applicant has the potential to make a good medical student, the board can recommend him for admittance on the basis of its investigation.

In return for this assistance from the Student Medical Loan Fund Program, the applicant must agree to practice medicine in an Illinois town—generally of approximately 5,000 population—for five years. The applicant may select a town from an up-to-date list of communities which have demonstrated need and ability to support a physician, but choice is subject to approval by the program's board. The purpose of this agreement is to provide family doctors for the smaller rural communities in Illinois.

To be considered for assistance from the Student Medical Loan Fund Program, an applicant must be recommended by the presidents of his home county medical society and farm bureau. Rules of eligibility require that an applicant be a male pre-medical student of at least three years college standing . . . an Illinois resident outside of Cook County . . . and that he take a medical college admissions test for review by the program's board.

The board of the Student Medical Loan Fund Program conducts its annual interview about Feb. 1 for those students who wish to enter medical school the following September. Those approved for assistance are accepted on a comparative and competitive basis. Information and applications may be obtained from Roy E. Will, secretary, Joint Student Medical Loan Fund Board, Illinois Agricultural Association, 1701 Towanda Ave., P.O. Box 901, Bloomington.

Scientific Speakers Bureau

The Illinois State Medical Society, through its Scientific Speakers Bureau, aids county societies in their efforts to keep members abreast of medical advances. Sponsored by the ISMS Committee on Continuing Education, the bureau helps local groups arrange and conduct postgraduate medical education programs in their own areas. This assistance includes obtaining speakers, helping them with travel arrangements, preparing and mailing notices of meetings, and paying an honorarium and travel expenses. ISMS can also provide publicity services upon request.

The Bureau operates under a grant from Merck, Sharp & Dohme, which provides funds to the ISMS Educational and Scientific Foundation for the specific purpose of obtaining speakers for county medical society meetings.

The following procedures govern use of the Bureau:

1) County societies select program material from a roster containing the names of more than 400 speakers and over 1,000 topics.

2) Eight weeks advance notice is needed for help in program planning. This allows sufficient time for ISMS to locate a speaker and for the speaker to arrange his schedule and prepare his talk.

3) Requests should be addressed to the Chairman of the Committee on Continuing Education (currently Dr. Robert Freeark), Illinois State Medical Society, 360 N. Michigan Ave., Chicago. A "Request for Speakers" form is sent by return mail. This form asks for information needed for recruiting a suitable speaker.

4) Publicity to media in the area of the meeting will be handled by ISMS upon request of the county society.

5) Postcard notices will be mailed to physicians in the county if requested.

6) In cases where the county society makes its own arrangements for speakers, ISMS will prepare and mail notices if the information is received no less than three weeks prior to the meeting. In these cases, ISMS will not pay honorarium or expenses of the speaker and will bill the society for postage.

7) The county medical society program chairman and the speaker are both expected to submit to ISMS a report on the meeting and the arrangements.

Doctor's Responsibility To the Press

Physicians and the press are partners in providing a link of communication between the medical profession and the public. But, the press cannot carry out its traditional responsibility in informing the public in the area of medical and patient news without the cooperation of the medical society and individual doctors. The inevitable penalty of silence by the doctors is public ignorance, misunderstanding and fear. In a democracy, public ignorance, misunderstanding and fear can be dangerous to professional freedom.

The following outline—based on a press code adopted by the Macon County Medical Society—is suggested as a pilot guide for individual physicians and county societies in Illinois.

Availability

1) The officers, committee chairmen or designated spokesmen of county medical societies shall be available at all times to mass media personnel to provide authentic information on medical subjects.

2) A list of current spokesmen shall be supplied by county societies to the executives of every newspaper, radio and television station in the country.

3) These spokesmen may be quoted by name. They should not be considered by their colleagues as self-seeking, since authoritive attribution is done in the best interests of the public and the profession. (In addition, physicians are private citizens and as such are the subjects of news stories in their social and civic activities just like any other citizen.)

Physician News

Physicians, as scientists, are encouraged to give newspaper interviews and appear on radio and television programs on medical subjects. Physicians may report on new or unusual diseases or treatments within an ethical framework. In these instances, they should, whenever possible, notify their county society publicity chairman or the Illinois State Medical Society.

Physicians may be asked to comment as individuals on politically controversial subjects (such as socialized medicine). In this event, the physician should clearly indicate that he is expressing his personal viewpoint which should not be construed as a statement of medical society policy.

A medical society officer, however, should remember that any comment he makes—whether or not intended as personal viewpoint—is generally accepted as official policy.

Patient News

As the patient's personal physician, the doctor has an obligation to respect confidences that come to him in the performance of his duty and may not release news except with the patient's consent or those authorized to speak for him. When the press learns of the illness of private patients from other sources, the physician may cooperate with the press in answering any inquiries in the interest of accuracy and to avoid embarrassment.

When news of patients is of such a nature that it automatically falls in the public domain (see next section) physicians should feel free to release information within the framework of this code.

Patient information may be given where the nature of injuries, illness or treatment is of special interest. The report of such information shall be more in the nature of scientific information, rather than an expose of an individual affliction.

Public Domain

News of public domain includes births, deaths, accidents, police cases, and persons prominent in the public eye. The following information may be made available:

1) Personal Information including:

Patient's name, address, age, sex, race, marital status, employer, occupation, name of new-

(Continued on page 182)

The Senior Citizen Blue Shield Plan

The Senior Citizen Blue Shield Plan, as approved by the Illinois State Medical Society, was designed specifically to provide medical-surgical coverage for the aged at a reasonable cost so that a compulsory program will not be necessary either now or in the future.

Its primary objective is to make it possible for the over 65 to provide adequate medical care coverage for themselves without government interference in the practice of medicine.

The plan includes a schedule of allowances based on the professional service index covering services to all persons over 65 years of age. Examples of these maximum allowances follow herewith. These allowances would be accepted by a physician as payment in full only for individuals with incomes of less than $2,500 and for families where the combined income of husband and wife does not exceed $4,000. Those with greater incomes would be expected to pay the physician's usual fees with the allowance of this senior citizen plan applied against such fees.

Thus this program retains free choice of physician and the right of the physician to set his own fees for patients who are able to pay.

For the medically indigent the Kerr-Mills type of legislation still would be available to provide financial assistance to people over 65 who cannot provide medical coverage for themselves.

Examples of Maximum Allowances

SURGICAL SERVICE	
ABDOMEN	
Appendectomy	$105.00
Cholecystectomy	157.00
Subtotal Gastrectomy	206.00
BREAST	
Mastectomy, simple, unilateral	$ 84.00
Mastectomy, radical, unilateral	171.00
CHEST	
Thoracotomy, exploratory	$128.00
Pneumonectomy	258.00
FRACTURES	
Ankle, bimalleolar including Potts'	$ 76.00
Phalanx, one finger or thumb, simple	15.00
DISLOCATIONS	
Hip (Femur)	$ 87.00
Knee (Tibia), simple	50.00
Shoulder (Humerus), simple	35.00
CARDIOVASCULAR	
Ligation and division of saphenous vein with or without retrograde injection, or distal interruptions, unilateral	$ 52.00
With Stripping (Multiple distal interruptions), unilateral	84.00
GENITO-URINARY TRACT	
Nephrectomy	$189.00
Prostatectomy, transurethral resection	177.00
HERNIA	
Hernioplasty, unilateral	$ 99.00
Recurrent	113.00
INFECTIONS	
Drainage of furuncle	$ 9.00
Drainage of carbuncle	12.00
GYNECOLOGY	
Panhysterectomy; total hysterectomy (corpus and cervix)	$168.00
PARACENTESIS, TAPPING	
Abdominal paracentesis	$ 9.00
Thoracentesis	9.00
RECTUM	
Complete protectomy, combined abdominoperineal, one or two stages	$258.00
Hemorrhoidectomy, internal	73.00
GENERAL MEDICAL CARE	
First daily visit	$ 9.75
Second daily visit	6.50
Third through seventieth daily visit	3.25
DIAGNOSTIC X-RAY SERVICE	
Ankle	$ 9.00
Elbow	9.00
Gallbladder (dye)	18.00
Skull, multiple views	23.00
Chest	9.00
RADIATION THERAPY	
Superficial (soft X-ray), per treatment	$ 9.00
Deep X-ray (orthovoltage), per treatment	9.00
Megavoltage X-ray (cobalt, Betatron), per treatment	14.00
Radium plaque or mold, per treatment	14.00
Radium implantation, per treatment	68.00
CLINICAL AND SURGICAL PATHOLOGY	
Blood count, complete	$ 4.00
Spinal fluid, routine chemical and microscopic	8.00
Sputum, smear, direct	3.00
Tissue sections	12.00
Urinalysis, complete routine	3.00
ANESTHESIA	
Appendectomy	$ 21.00
Cholecystectomy	32.00
Gastrectomy, subtotal	41.00
Hysterectomy	35.00
Prostatectomy	35.00

(Continued from page 180)

born's parents, name of next-of-kin, and name of undertaker.

2) Nature of Accident

a) Only general information regarding injuries should be released.

b) It may be stated that there are internal injuries.

c) If the patient is unconscious when brought to the hospital, a statement to that effect may be made.

d) A knife or a bullet wound may be identified as such, but no statement should be made on the circumstances in which the wound was inflicted.

e) A statement may be made that the patient received burns and the part of the body affected may be indicated.

f) No statement should be made that the patient has been poisoned—except by accident—nor should the poisonous substance be identified in describing the patient's injury.

g) No statement should be made that there was suicide or attempted suicide.

h) No statement should be made that intoxication or drug addiction was involved in the patient's condition.

i) No statement shall be made that moral turpitude was involved in a patient's condition.

3) Diagnosis and Prognosis

a) Inasmuch as a diagnosis may be made only by a physician and may depend on X-ray and laboratory studies, no diagnosis should be made except by the attending physician.

b) For the above reason, prognosis should be given only by the attending physician or at his direction.

4) Patient's Condition

A statement may be made as to the general condition of the patient with the following classifications: a) Minor Injuries, b) Good, c) Fair, d) Serious, e) Critical.

Photographs

Written Consent or witnessed verbal consent of patients and the attending physician are necessary before pictures can be taken in the hospital. If a patient is a minor, the permission of the parents and the attending physician will be required.

Deceased or Unconscious Patients may not be photographed, except in police cases.

Patients With Severe Burns or Facial Injuries, generally, will not be photographed even though consent is obtained. Sound judgment must govern exceptions.

Photographs have strong reader appeal and should be used whenever they can be used in good taste to heighten the effect of stories.

Woman's Auxiliary to the Illinois State Medical Society

I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals.

This loyalty pledge actually describes the functions of the Woman's Auxiliary to any medical society, whether it be a county society of six women or a metropolitan organization having thousands of members.

It is a privilege to be a member of a medical auxiliary and to participate in its many and varied activities. All that is required for membership is that a woman be the wife (or widow) of a physician in good standing in his county medical society.

At all times we are under the supervision and guidance of our physician advisory committee at the grass roots level of the county medical society. We are expected to follow and support whatever projects our advisory committee assigns us. We are to assist the county medical society in its programs for advancement of medicine and general health activities. We help promote friendly relations and cultivate mutual understanding among families of physicians.

Our goal this year in Illinois is to increase membership in the organized auxiliaries and help to develop auxiliaries in areas where they do not exist.

As physicians' wives, we feel strongly that if we identify ourselves with community affairs, we are helping to sustain the Health Team—and its captain, the auxiliary member's husband.

We must keep informed and utilize our legislative know-how wisely. This can partially be done by husband and wife becoming paying members of AMPAC and IMPAC.

"For more than 20 years the advocates of compulsory health insurance have been losing the fight, but we can lose only once," Mrs. Richard Sutter, president-elect of the Woman's Auxiliary to the American Medical Association warned in an address last fall. This statement continues to be true not only for the present but far into the future.

This year the Illinois Auxiliary endeavors are to be implemented through the concept, "Health and Freedom Through Love and Service."

Mrs. Willard C. Scrivner
President

1964-65 Officers

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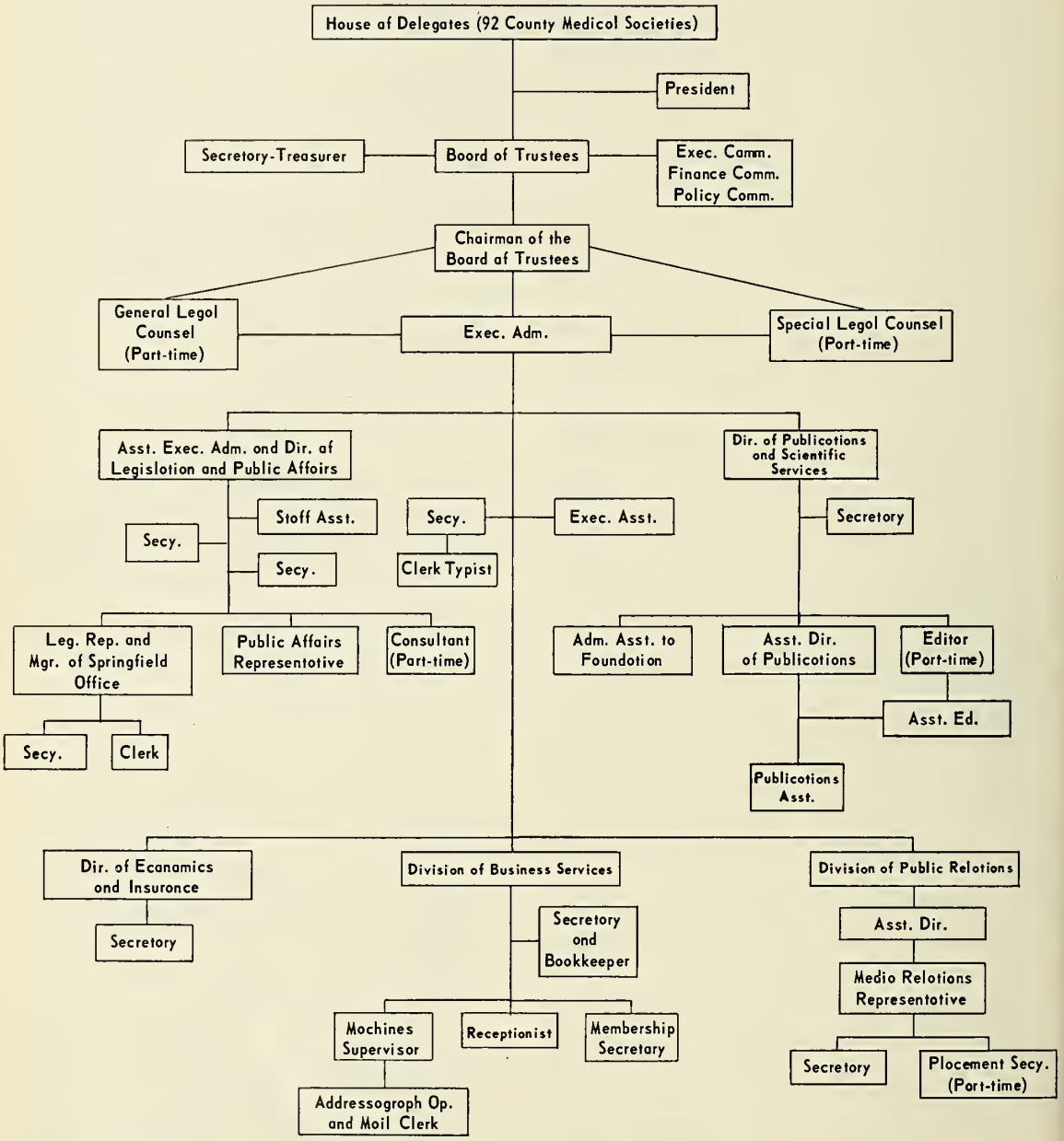
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11. DuPage, Kankakee, Will-Grundy—Mrs. Richard J. Graff, 100 Barnard Rd., Manteno

ISMS STAFF ORGANIZATIONAL CHART

(As of January 1, 1964)



29 Full-time Employees 1 Foundotion Employee 5 Port-time Employees



Legislative and Medical Service Organizations

While the Illinois State Medical Society itself is strictly non-partisan in politics, it urges all of its members to take an active interest in political affairs. The organization often takes a stand on legislative questions, but never supports candidates, although it encourages its members to do so.

Officers of ISMS believe that it is the duty of physicians to become politically informed and to participate in public affairs. The following section is a directory of state government officials, agencies and functions as well as a reference to medically-related private or independent organizations. It should be pointed out that the listing was up-to-date at the time of publication, but that the nature of the directory is such that its contents are constantly changing. It should be particularly noted that the legislative section lists members of the 73rd General Assembly and that elections to be held in November 1964 will make sweeping changes in this list because all members of the Illinois House of Representatives will be elected from the state at large rather than from individual districts.

The Society will send its members a roster of the next general assembly by the time it meets in January 1965.



Congressional Assignments to Committees
88th Congress

Senator Everett M. Dirksen (R), Pekin
Committee on Finance
Committee on the Judiciary
Special Committee on Aging
Joint Committee on Immigration & Nationality Policy

Senator Paul H. Douglas (D), Chicago
Committee on Banking & Currency
Committee on Finance
Joint Committee on Defense Production
Joint Economic Committee, Chairman

Cook County
District

1 Rep. William L. Dawson (D), Chicago
Committee on District of Columbia
Committee on Government Operations, Chairman

2 Rep. Barratt O'Hara (D), Chicago
Committee on Foreign Affairs

3 Rep. William T. Murphy (D), Chicago
Committee on Foreign Affairs

4 Rep. Edward J. Derwinski (R), South Holland
Committee on Foreign Affairs
Committee on Post Office & Civil Service

5 Rep. John C. Kluczynski (D), Chicago
Committee on Public Works
Select Committee on Small Business

7 Rep. Ronald V. Libonati (D), Chicago
Committee on Judiciary
Committee on Veterans' Affairs

8 Rep. Daniel D. Rostenkowski (D), Chicago
Committee on Interstate & Foreign Commerce

9 Rep. Edward R. Finnegan (D), Chicago
Committee on Appropriations

10 Rep. Harold R. Collier (R), Berwyn
Committee on Ways & Means

11 Rep. Roman C. Pucinski (D), Chicago
Committee on Education & Labor

13 Rep. Donald Rumsfield (R), Glenview
Committee on Science & Astronautics

Downstate

12 Rep. Robert McClory (R), Waukegan
Committee on Government Operations

14 Rep. Elmer J. Hoffman (R), Wheaton

15 Rep. Charlotte T. Reid (R), Aurora
Committee on Interior & Insular Affairs'

16 Rep. John B. Anderson (R), Rockford
Committee on Rules
Committee on Government Operations
Joint Committee on Atomic Energy
Select Committee on Government Research

17 Rep. Leslie C. Arends (R), Melvin
Committee on Armed Services

18 Rep. Robert H. Michel (R), Peoria
Committee on Appropriations

19 Rep. Robert T. McLoskey (R), Monmouth
Committee on Public Works

20 Rep. Paul Findley (R), Pittsfield
Committee on Agriculture
Committee on Education & Labor

21 Rep. Kenneth J. Gray (D), Frankfort
Committee on Public Works

22 Rep. William L. Springer (R), Champaign
Committee on District of Columbia
Committee on Interstate & Foreign Commerce

23 Rep. George E. Shipley (D), Olney
Committee on Appropriations

24 Rep. Melvin Price (D), East St. Louis
Committee on Armed Services
Joint Committee on Atomic Energy
Select Committee on Government Research

Illinois State Government
General Assembly

The state government is divided into three branches—legislative, executive, and judicial. The legislative power is vested in the General Assembly, which is composed of the State Senate and the House of Representatives (a bicameral assembly).

For representation in the General Assembly, there are 58 senatorial districts and 59 representative districts. Each Senate district elects one senator; each representative district elects three representatives. Thus, the Senate has 58 members and the House 177. The senators are elected for four-year terms, and the representatives serve two-year terms. Senators in the districts having even numbers are elected in Presidential election years; those in districts with odd numbers are chosen at elections in the intervening even-numbered years. (Note: In 1964 only, all members of the House will be elected on a State-wide basis)

The General Assembly normally meets in the first six months of each odd-numbered year, although may be called into special session by the Governor. The General Assembly's functions

are to enact, amend, or repeal laws or adopt appropriation bills, act on amendments to the United States Constitution, propose and submit amendments to the State Constitution, and to act to remove public officials.

When the House of Representatives is organized, a Speaker or presiding officer is elected for the biennium. The presiding officer of the Senate is the Lieutenant Governor. To facilitate the handling of legislation, the members of the Senate and House are assigned to designated committees to consider bills of like subject matter. These committees usually hold public hearings to discuss legislation before the measure is taken up by the entire House or Senate. There are approximately 50 committees.

State Senators

(Term four years)

(Senators in odd numbered districts were elected Nov. 6, 1962; those in even numbered districts were elected Nov. 8, 1960. Republicans, 35; Democrats, 23.)

District	Name, Politics and Address
1	Arthur J. Bidwill, Rep., 1403 Bonnie Brae, River Forest
2	Arthur W. Sprague, Rep., 345 S. Spring Ave., La Grange
3	John A. Graham, Rep., 715 S. Cook, Barrington
4	W. Russell Arrington, Rep., 929 Edgemere Ct., Evanston
5	Nathan J. Kinnally, Dem., 7234 S. Paxton Ave., Chicago
6	Frank M. Ozinga, Rep., 9626 S. Homan Ave., Evergreen Park
7	Anthony J. DeTolve, Dem., 1038 S. Sangamon, Chicago
8	Arthur R. Gottschalk, Rep., 320 Marquette St., Park Forest
9	Morgan M. Finley, Dem., 3550 S. Lowe Ave., Chicago
10	Seymour Fox, Dem., 5732 N. Kerbs Ave., Chicago
11	Fred J. Smith, Dem., 4949 S. South Parkway, Chicago
12	Edmund G. Sweeney, Dem., 7928 S. California Ave., Chicago
13	Daniel Dougherty, Dem., 1957 E. 93rd St., Chicago
14	Donald J. O'Brien, Dem., 1102 W. Garfield Blvd., Chicago
15	A. L. Cronin, Dem., 9546 S. Oakley Ave., Chicago
16	William C. Harris, Rep., 709 S. Vermillion St., Pontiac
17	Arthur R. Swanson, Rep., 12556 S. Harvard Ave., Chicago
18	Hudson R. Sours, Rep., 2623 W. Moss Ave., Peoria
19	Robert F. Hatch, Rep., 10615 S. Fairfield Ave., Chicago
20	Samuel L. Martin, Rep., 324 Coney Ave., Watseka
21	Thomas A. McGloon, Dem., 5964 W. Adams Blvd., Chicago
22	John P. Meyer, Rep., 1631 Oak St., Danville
23	Frank J. Kocarek, Dem., 1718 S. Loomis, Chicago
24	Everett R. Peters, Rep., 501 S. Fifth St., St. Joseph
25	Joseph L. De La Cour, Dem., 185 E. Chestnut St., Chicago
26	David Davis, Rep., 1114 E. Monroe St., Bloomington
27	Robert E. Cherry, Dem., 4300 N. Marine Dr., Chicago
28	Robert W. McCarthy, Dem., 555 Eleventh St., Lincoln
29	Walter P. Hoffelder, Rep., 5641 N. Mango Ave., Chicago
30	Egbert B. Groen, Rep., 3 Rosewood Lane, Pekin
31	Bernard S. Neistein, Dem., 4128 W. Van Buren St., Chicago
32	T. Mac Downing, Rep., 1111 W. Adams St., Macomb
33	Thad. L. Kusibab, Dem., 2043 W. Augusta Blvd., Chicago
34	Paul (Red) Graham, Rep., 116 Wabash Ave., Mattoon
35	Dennis J. Collins, Rep., 545 Northern Lane, DeKalb
36	Lillian E. Schlagenhauf, Rep., 418 S. 18th, Quincy
37	Joseph R. Peterson, Rep., 1309 S. Main St., Princeton
38	William "Bill" Lyons, Dem., 501 E. Elm, Gillespie

District	Name, Politics and Address
39	Fred J. Hart, Rep., 501 W. Bluff St., Streator
40	Edward C. Eberspacher, Dem., 219 N. Washington St., Shelbyville
41	Harris W. Fawell, Rep., 620 Wehrli Dr., Naperville
42	Dwight P. Freidrich, Rep., 915 Frazier, Centralia
43	Robert A. "Bob" Welch, Dem., 49 W. Birch St., Canton
44	John G. Gilbert, Rep., 513 W. Walnut St., Carbondale
45	George E. Drach, Rep., 1524 Noble Ave., Springfield
46	Paul W. Broyles, 1800 Franklin, Rep., Mt. Vernon
47	Paul Simon, Dem., 306 E. Market, Troy
48	Mrs. Madge (Herschel S.) Green, Rep., 509 W. Grand Prairie, Palestine
49	Alan J. Dixon, Dem., 415 McKinley Dr., Belleville
50	William L. Grindle, Dem., 216 Circle Dr., Herrin
51	Gordon E. Kerr, Rep., Brookport
52	Robert Coulson, Rep., 1031 Pacific Ave., Waukegan
53	Donald D. Carpentier, Rep., 477 27th Ave., East Moline
54	Robert R. Canfield, Rep., R. R. No. 4, Rockford
55	Paul A. Ziegler, Dem., 700 Second St., Carmi
56	Everett E. Laughlin, Rep., 1611 Parkside Ct., Freeport
57	Richard R. "Dick" Larson, Rep., 694 Bateman St., Galesburg
58	Merritt J. Little, Rep., 227 S. Elmwood Dr., Aurora

Representatives

(Term two years.)

(Elected Nov. 6, 1962. Republicans 90, Democrats 87.)

District	Name, Politics and Address
1	Jack E. Walker, Rep., 18018 Arcadia Ave., Lansing
	Edwin A. McGowan, Rep., 21 W. 150th St., Harvey
	Anthony Scariano, Dem., 38 W. Rocket Circle, Park Forest
2	Terrel E. Clarke, Rep., 4070 Central Ave., Western Springs
	Don A. Moore, Rep., 14636 S. Long Ave., Midlothian
	Frank X. Downey, Dem., 5085 Lamb Dr., Oak Lawn
3	George E. Dolezal, Rep., 7010 W. 34th St., Berwyn
	Frank A. Marek, Rep., 5434 W. 31st St., Cicero
	Paul G. Ceaser, Dem., 3622 S. Oak Park Ave., Berwyn
4	Richard A. Walsh, Rep., 1003 N. Elmwood Ave., Oak Park
	Claude A. Walker, Rep., 7402 Randolph St., Forest Park
	Raymond J. Welsh, Jr., Dem., 911 N. Oak Park Ave., Oak Park
5	Richard L. LoDestro, Rep., 1940 N. 75th Ct., Elmwood Park
	William D. Walsh, Rep., 801 N. Kensington Ave., La Grange Park
	Leo J. Bartoline, Dem., 2902 Elder Lane, Franklin Park
6	John W. Carroll, Rep., 26 S. Merrill Ave., Park Ridge
	Arthur E. Simmons, Rep., 9421 LeClaire Ave., Skokie
	Bernard M. Peskin, Dem., 326 Southgate Dr., Northbrook
7	Frances L. Dawson, Rep., 2609 Lincoln St., Evanston
	Alan R. Johnston, Rep., 206 Cumberland Ave., Kenilworth
	Robert Marks, Dem., 420 Ashland Ave., Evanston
8	Michael F. Zlatnik, Rep., 6300 N. Sheridan Rd., Chicago
	Esther Saperstein, Dem., 6538 N. Ashland Ave., Chicago
	Paul F. Elward, Dem., 1532 W. Chase Ave., Chicago
9	William E. Pollack, Rep., 3829 N. Seeley Ave., Chicago
	Kenneth E. Moberley, Rep., 5118 N. Winchester Ave., Chicago
	Nicholas Zagone, Dem., 2265 W. Giddings, Chicago
10	Albert W. Hachmeister, Rep., 423 W. Barry Ave., Chicago

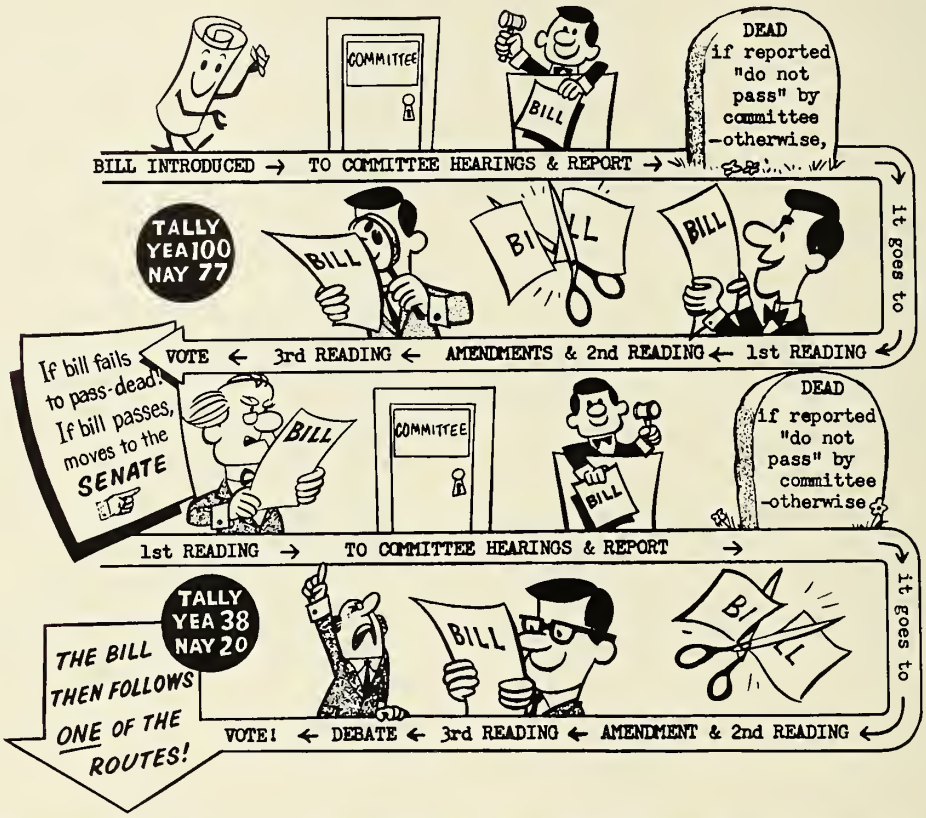
District	Name, Politics and Address
	John Merlo, Dem., 433 W. Diversey Pkwy., Chicago
	Frank Lyman, Dem., 5000 N. Marine Dr., Chicago
11	Paul J. Randolph, Rep., 850 N. De Witt Pl., Chicago
	Harry P. Bauler, Dem., 1722 Crilly Ct., Chicago
	Edward W. Wolbank, Dem., 619 N. State St., Chicago
12	Charles O. Miller, Rep., 2493 N. Milwaukee Ave., Chicago
	Kenneth W. Course, Dem., 3413 W. Armitage Ave., Chicago
	La Salle J. DeMichaels, Dem., 2851 W. Fletcher St., Chicago
13	Elroy C. Sandquist, Sr., Rep., 2762 W. Wilson Ave., Chicago
	James P. Loukas, Dem., 2509 W. Gunnison St., Chicago
	** Nathan J. Kaplan, Dem., 6049 N. Bernard St., Chicago
14	Oscar Hansen, Rep., 4507 N. Long Ave., Chicago
	Helmut W. Stolle, Rep., 6111 N. Northwest Hwy., Chicago
	Chester P. Majewski, Dem., 3906 N. Oketo Ave., Chicago
15	Peter J. Miller, Rep., 1932 N. Kedvale Ave., Chicago
	Chester R. Wiktorski, Jr., Dem., 5300 W. Drummond Pl., Chicago
	John F. Leon, Dem., 1811 N. Tripp Ave., Chicago
16	Bernard McDevitt, Rep., 21 N. Mason Ave., Chicago
	Robert F. McPartlin, Dem., 5100 W. Adams St., Chicago
	Peter M. Callan, Dem., 5567 W. Gladys Ave., Chicago
17	Peter C. Granata, Rep., 1025 S. May St., Chicago
	Sam Romano, Dem., 736 S. Claremont Ave., Chicago
	Andrew A. Euzzino, Dem., 917 S. Blue Island Ave., Chicago
18	Louis F. Capuzi, Rep., 710 N. Rockwell St., Chicago
	John P. Touhy, Dem., 3241 W. Washington Blvd., Chicago
	Lawrence DiPrima, Dem., 3441 W. Ohio St., Chicago
19	Louis Janczak, Rep., 1315 N. Bosworth Ave., Chicago
	** Richard A. Napolitano, Dem., 1057 N. Sacramento Ave., Chicago
	Edward J. Shaw, Dem., 2208 W. Walton, Chicago
20	William H. Robinson, Rep., 2851 S. South Parkway, Chicago
	Corneal A. Davis, Dem., 3223 S. Calumet Ave., Chicago
	James Y. Carter, Dem., 601 E. 32nd St., Chicago
21	J. Horace Gardner, Rep., 6014 S. Indiana Ave., Chicago
	Cecil A. Partee, Dem., 6032 S. Michigan Ave., Chicago
	** Kenneth E. Wilson, Dem., 4524 S. South Park Ave., Chicago
22	Elwood Graham, Rep., 6711 S. Langley Ave., Chicago
	Charles F. Armstrong, Dem., 6942 S. Prairie Ave., Chicago
	* Lycurgus Conner, Dem., 4805 S. Champlain Ave., Chicago
23	Noble W. Lee, Rep., 5541 S. Woodlawn Ave., Chicago
	Abner J. Mikva, Dem., 5545 S. Kenwood Ave., Chicago
	Robert E. Mann, Dem., 5339 S. Harper Ave., Chicago
24	John J. Donovan, Rep., 148 W. 112th Pl., Chicago
	Henry M. Lenard, Dem., 8111 S. Colfax Ave., Chicago
	Nick Svalina, Dem., 10723 S. Ave. F., Chicago
25	Edward Schneider, Rep., 8638 S. Euclid Ave., Chicago
	John G. Ryan, Dem., 1526 E. 83rd Pl., Chicago
	Peter J. Whalen, Dem., 8029 S. Vincennes Ave., Chicago
26	George F. Stastny, Rep., 10444 S. Hamlin Ave., Chicago
	Raymond J. Kahoun, Rep., 7950 S. Morgan St., Chicago
	John P. Downes, Dem., 8831 S. Paulina St., Chicago
27	Walter "Babe" McAvoy, Rep., 6039 S. California Ave., Chicago
	Michael H. McDermott, Dem., 6706 S. Wood St., Chicago
	Michael E. Hannigan, Dem., 6646 S. Honore St., Chicago
28	Michael A. Ruddy, Rep., 1700 W. Garfield Blvd., Chicago
	Frank J. Smith, Dem., 4549 S. Emerald Ave., Chicago
	John G. Fary, Dem., 3600 S. Damen Ave., Chicago

District	Name, Politics and Address
29	John F. Wall, Rep., 2874 S. Hillock, Chicago
	Matt Ropa, Dem., 1710 W. 21st St., Chicago
	John M. Vitek, Dem., 2953 S. Union Ave., Chicago
30	Hector A. Brouillet, Rep., 3532 S. California Ave., Chicago
	** Lillian Piotrowski, Dem., 2819 W. 38th Pl., Chicago
	Frank C. Wolf, Dem., 4046 W. 26th St., Chicago
31	John H. Conolly, Rep., 4305 Grand Ave., Gurnee
	W. J. Murphy, Rep., Rte. No. 1, Box 607, Antioch
	* Jack Bairstow, Dem., 224 Ash St., Waukegan
32	A. B. McConnell, Rep., R. R. No. 2, Woodstock
	Paul F. Jones, Rep., 502 11th St., Rochelle
	* Albert H. Pearson, Dem., Rte. No. 1, Crystal Lake
33	Merle K. Anderson, Rep., Durand
	Bertil T. Rosander, Rep., 615 Oak Knolls Ave., Rockford
	William Pierce, Dem., 305 Hunter Ave., Rockford
34	George S. Brydia, Rep., 105½ W. Third St., Prophetstown
	Kenneth W. Miller, Rep., 1410 Ave. H, Sterling
	John K. Morris, Dem., R. F. D. No. 1, Chadwick
35	Allan L. "Al" Schoeberlein, Rep., 1543 Downer Pl., Aurora
	J. Lisle Laufer, Rep., Hampshire
	John Jerome (Jack) Hill, Dem., 741 Sheridan St., Aurora
36	John N. Erlenborn, Rep., 429 Prairie Ave., Elmhurst
	Lewis V. Morgan, Jr., Rep., 1126 E. Wakeman Ave., Wheaton
	William A. Redmond, Dem., 250 Tioga St., Bensenville
37	Warren L. Wood, Rep., 736 Bartlett Ave., Plainfield
	Meade Baltz, Rep., 600 Buell Ave., Joliet
	Francis J. Loughran, Dem., 1220 Sterling Ave., Joliet
38	Carl W. Soderstrom, Rep., 1001 Riverside Ave., Streator
	Harland D. Warren, Rep., 722 Green St., Ottawa
	Joseph P. Stremlau, Dem., R. F. D. No. 2, Mendota
39	Thomas F. Railsback, Rep., 1834 14th St., Moline
	Robert "Bob" Austin, Rep., 1218 20th Ave., East Moline
	Paul E. Rink, Dem., 1549 24th St., Rock Island
40	Charles K. Willett, Rep., 218 Brinton Ave., Dixon
	W. K. (Kenny) Davidson, Rep., 111½ E. Second St., Kewannee
	Tobias (Toby) Barry, Dem., 304 Central Ave., Ladd
41	Edward McBroom, Rep., 1190 S. 8th Ave., Kankakee
	Carl T. Hunsicker, Rep., 905 N. Main St., Pontiac
	Joe W. Russell, Dem., 22 E. Chestnut St., Piper City
42	Ben S. Rhodes, Rep., 1211 Broadway, Normal
	Dean McCully, Rep., 430 E. 4th St., Minonk
	J. W. "Bill" Scott, Dem., 730 Towanda St., Bloomington
43	Robert L. Burhans, Rep., 5508 Montclair Ave., Peoria
	John C. Parkhurst, Rep., 1607 W. Margaret, Peoria
	James D. Carrigan, Dem., 156 E. South Gate Rd., Peoria
44	Charles W. Clabaugh, Rep., 901 W. Daniel, Champaign
	Dr. Edwin E. Dale, Rep., 307 Elmwood Rd., Champaign
	Leo Pfeffer, Dem., Seymour
45	Clarence G. Hall, Rep., 212 N. Sandusky St., Catlin
	Charles M. (Chuck) Campbell, Rep., 102 N. Logan Ave., Danville
	Robert (Bob) Craig, Dem., Indianola
46	Rae C. Heiple II, Rep., Abingdon
	C. R. (Butch) Ratcliffe, Dem., 1407 Jefferson St., Beardstown
	George L. Saal, Dem., 910 Washington St., Pekin
47	George P. Johns, Rep., 156 Oakdale Blvd., Decatur
	Herman L. Dammerman, Dem., 321 Delavan St., Lincoln
	John W. Alsup, Dem., 1712 N. Church St., Decatur
48	George P. Coutrakon, Rep., 1733 S. 5th St., Springfield
	G. William Horsley, Rep., 1402 W. Lake Dr., Springfield
	Allen T. Lucas, Dem., 2216 Whittier Ave., Springfield
49	Harris Rowe, Rep., 1152 W. State St., Jacksonville

District	Name, Politics and Address
	H. B. Ihnen, Rep., 330 East Ave., Quincy
	Carl H. Wittmond, Dem., Brussels
50	Clarence E. Neff, Rep., Stronghurst
	Raymond E. (Ray) Anderson, Rep., 1606 N. Kellogg St., Galesburg
	Dan Teefey, Dem., 400 S. W. Cross, Mt. Sterling
51	John W. Lewis, Jr., Rep., R. R. No. 2, Marshall
	Edward M. Finfgeld, Rep., 326 Washington St., Arcola
	* Dave Glenn, Dem., 311 Cumberland St., Greenup
52	Orval W. Hittmeier, Rep., R. F. D. No. 2, Litchfield
	Charles Ed Schaefer, Dem., 208 E. Union St., Nokomis
	Stuart J. Traynor, Dem., 302 E. Market St., Taylorville
53	Ralph T. Smith, Rep., No. 1 Signal Dr., Alton
	Leland J. Kennedy, Dem., 926 Washington Ave., Alton
	Lloyd "Curly" Harris, Dem., 3233 Aubrey, Granite City
54	Ed Lehman, Rep., 519 N. 38th St., E. St. Louis
	Frank Holten, Dem., 1114 St. Louis Ave., E. St. Louis
	Dan E. Costello, Dem., 1528 N. 43rd St., E. St. Louis
55	Fred Branson, Rep., 402 Cedar, Centralia
	Miles E. Mills, Dem., 602 S. 2nd St., Effingham
	James H. Donnewald, Dem., 600 N. Clinton St., Breese
56	Garrel Burgoon, Rep., 1605 State St., Lawrenceville
	Ben C. Blades, Rep., 503 N.E. 4th, Fairfield
	Robert V. Walsh, Dem., 221 W. North St., Grayville
57	Wayne Fitzgerrell, Rep., Sesser
	Bert Baker, Dem., 205 W. 5th St., Benton
	Clyde Lee, Dem., 818 Pace Ave., Mt. Vernon
58	Gale Williams, Rep., 625 N. 15th St., Murphysboro
	Clyde L. Choate, Dem., 211 Sanborn Dr., Anna
	James D. Holloway, Dem., 211 W. Broadway, Sparta
59	C. L. McCormick, Rep., Vienna
	Joseph R. Hale, Rep., Main St., Ridgway
	Paul Powell, Dem., Vienna

* Deceased
** Resigned

Course of a bill in the General Assembly:



1 IF SENATE DOESN'T AMEND ORIGINAL HOUSE BILL, IT GOES TO THE GOVERNOR FOR ACTION. ("Action" means he may VETO it, SIGN it, or ALLOW IT TO BECOME LAW without his signature.)

2 IF SENATE DOES AMEND ORIGINAL HOUSE BILL, IT GOES BACK TO THE HOUSE. IF HOUSE O K 's THE AMENDMENTS, BILL GOES TO THE GOVERNOR FOR ACTION.

3 IF SENATE AMENDS & HOUSE DOESN'T O K, SENATE MAY WITHDRAW AMENDMENTS & BILL GOES TO GOVERNOR. IF SENATE DOESN'T WITHDRAW AMENDMENTS, BILL GOES TO CONFERENCE COMMITTEE. IF BOTH HOUSES FINALLY AGREE, BILL GOES TO GOVERNOR.

(or)

4 IF HOUSES STILL DON'T AGREE, BILL GOES TO 2nd CONFERENCE COMMITTEE. IF HOUSES FAIL TO APPROVE BILL, OR IF SPONSOR WITHDRAWS IT, THEN BILL IS DEAD.



Legislative Procedure

Each member of the General Assembly has the right to introduce bills or resolutions. After the introduction of the bill, it is referred to the appropriate committee. If the committee recommends the bill favorably, it is read a first time, usually by title, before the house in which it was introduced. A second reading must be held on a separate legislative day when amendments to it can be offered for consideration by the entire membership. The bill will then be given a third and final reading when it is acted upon by the entire membership of the house that is considering it.

Action by Both Houses

To pass, the bill must receive the favorable vote of the majority of the members elected (89 in the House; 30 in the Senate). These bills are then sent to the other house where essentially the same procedure is followed.

If, because of amendments in the second house, there are two versions of the same bill, conference committees may be appointed to work out the differences. Both houses must vote favorably on the same version of the bill before it can be sent to the Governor for his consideration.

If the Governor thinks the bill should become a law, he can either sign it or file it with the Secretary of State without his signature. If the Governor decides it would be unwise for the bill to become law, he can veto it. If he vetoes the bill, he must file a statement of objections. Two-thirds of the members elected to the House can override the veto. He can also veto specific items of an appropriations bill.

Appropriation Bills

"Bills making appropriations of money out of the treasury shall specify the objects and purposes for which the same are made, and if the Governor shall not approve any one or more of the items or sections contained in any bill, but shall approve the residue thereof, it shall become a law as to the residue in like manner as if he had signed it. The Governor shall then return the bill with any objections to the items or sections of the same not approved by him to the House in which the bill shall have originated, which House shall enter the objections at large upon its journal and proceed to reconsider so much of said bill as is not approved by the Governor. Any item or section of said bill not approved by the Governor shall be passed by two-thirds of the members elected to each of the two Houses of the General Assembly shall become part of said law, notwithstanding the objections of the Governor. Any bill which shall not be returned by the Governor within ten days, Sundays excepted after it shall have been presented to him, shall become a law in like manner as if he had signed it, unless the General Assembly shall, by their adjournment, prevent its return, in which case it shall be filed with his objections in the office of the Secretary of State within ten days after such adjournment or become a law." (Article V, Section 16, Illinois Constitution)

EXECUTIVE BRANCH

The Constitution provides that the Executive Department shall consist of the Governor, Lieutenant Governor, and Secretary of State, Auditor of Public Accounts, Treasurer, and Superintendent of Public Instruction, and Attorney General. All of these officials are elected for four-year terms. The Treasurer is the only elected state official who cannot succeed himself.

STATE OFFICERS

Governor, OTTO KERNER, Dem., Glenview
Lieutenant Governor, SAMUEL H. SHAPIRO, Dem., Kankakee
Secretary of State, WILLIAM CHAMBERLAIN, Dem., Springfield
Auditor of Public Accounts, MICHAEL J. HOWLETT, Dem., Chicago
State Treasurer, WILLIAM J. SCOTT, Rep., Evanston
Attorney General, WILLIAM G. CLARK, Dem., Chicago
Superintendent of Public Instruction, RAY PAGE, Rep., Springfield

DEPARTMENT OF REGISTRATION AND EDUCATION

William Sylvester White, Director
Chas. F. Kervin, Superintendent of Registration
John C. Watson, Assistant Director

The department is primarily concerned with the registration and licensing of the 25 different trades and professions. Three scientific surveys —the natural history survey, the water survey, and the geologic survey are also under the jurisdiction of R&E, as is the administration of the state museum. The department is the implementing agent of the medical practice act.

Medical Examining Committee
George G. Jackson, M.D., Chicago
Burtis E. Montgomery, M.D., Harrisburg
Kenneth H. Schnepp, M.D., Springfield
Philip G. Thomsen, M.D., Dolton
William Johnson, M.D., Galesburg
L. P. Rehberger, D.C., Highland
Seaver A. Tarulis, D.O., Chicago

MEDICAL PRACTICE ACT LICENSING AND ENFORCEMENT PROCEDURES

Illinois statutes provide for the licensing of physicians to practice medicine. "(1) in all of its branches, and (2) licensing of those persons to

practice without the use of drugs or medicine and without operative surgery."

The Medical Practice Act states, "no persons shall practice medicine or any of its branches or midwifery, or any system or method of treating human ailments without the use of drugs or medicines, or without operative surgery, without a valid existing license to do so." Applicant for license must pass an examination of his qualifications which must be satisfactory to the Department of Registration and Education.

Required Education

Minimum standards of professional education: 2 years' course of instruction in a college of liberal arts or its equivalent, or in such medical college in a course of instruction in the treatment of human ailments which course shall have been not less than 132 weeks in duration and shall have been completed within a period of not less than 35 months and in addition, a course of clinical training of not less than 12 months in a hospital. The college of liberal arts, medical school, and hospital must be reputable and in good standing in the judgment of the Department of Registration and Education.

All examinations provided by the Medical Practice Act shall be conducted by the Department of R&E. Examinations of applicants who seek to practice medicine in all of its branches which shall embrace the subjects of which knowledge is generally required of candidates for the degree of Doctor of Medicine by reputable medical colleges in the U.S., and shall be such in the judgment of the Department of R&E that will determine the qualifications of applicants to practice medicine in all of its branches.

Every license issued under the Act expires on July 1 of each even-numbered year. Every licensee under the Act may, biennially during the month of June of each even-numbered year, renew his license upon paying to the Department a renewal fee of $10.

Revocation and Suspension of License or Certificate

The Department may revoke or suspend the license, certificate, or state hospital permit of any person licensed under the Act upon any of the following grounds:

"1. Conviction of procuring or attempting to procure such an abortion as was made unlawful at the time under the provisions of the Criminal Code of the State;
2. Conviction of a felony;
3. Gross malpractice resulting in permanent injury or death of a patient; or engaging in dishonorable, unethical or unprofessional conduct of a character likely to deceive, defraud, or harm the public;
4. Obtaining a fee, either directly or indirectly, either in money or in the form of anything else of value or in the form of a financial profit as personal compensation, or as compensation, charge, profit or gain for an employer or for any other person or persons, on the fraudulent representation that a manifestly incurable condition of sickness, disease or injury of any person can be permanently cured;
5. Habitual intemperance in the use of ardent spirits, narcotics or stimulants to such an extent as to incapacitate for performance of professional duties;
6. Holding one's self out to treat human ailments under any name other than his own, or the personation of any other physician;
7. Employment of fraud, deception or any unlawful means in applying for or securing a license, certificate, or state hospital permit to practice the treatment of human ailments in any manner, or to practice midwifery, or in passing an examination therefor, or wilful and fraudulent violation of the rules and regulations of the department governing examinations;
8. Holding one's self out to treat human ailments by making false statements, or by specifically designating any disease, or group of diseases and making false claims of one's skill or of the efficacy or value of one's medicine, treatment or remedy therefor;
9. Professional connection or association with, or lending one's name to, another for the illegal practice by another of the treatment of human ailments as a business, or professional connection or association with any person, firm, or corporation holding himself, themselves, or itself out in any manner contrary to this Act;
10. Revocation or suspension of a medical license in a sister state, which revoked or suspended license was the basis of the licensee's obtaining a license in this State."

Rules and Regulations Adopted for the Administration of the Illinois Medical Practice Act, Effective March 18, 1955

Rule I—Accredited Colleges of Medicine and Surgery

Medical colleges having rules and curricula commensurate with and equivalent to the rules and curricula of the Colleges of Medicine of the University of Illinois, will be considered for accreditation by the Department of Registration and Education.

RULE II—ACCREDITED COLLEGES TEACHING SYSTEMS OF TREATING HUMAN AILMENTS WITHOUT THE USE OF DRUGS OR MEDICINE AND WITHOUT OPERATIVE SURGERY.

A professional college or institution teaching a system of treating human ailments without the use of drugs or medicine and without operative surgery shall be deemed reputable and in good standing in the judgment of the Department upon submission of proof of the following requirements:

(a) That a Dean or other Executive Officer, employed on a full-time basis supervises the students and curriculum.

(b) That the faculty is comprised of graduates in their specialty from recognized professional colleges or institutions.

(c) That the faculty is organized and each department has a director, professors, associate professors and assistant professors, each responsibile to his superior for his instruction in the particular subject he teaches.

(d) That, annually, a catalogue or brochure is published setting forth the requisites for admission to the college, tuition rates, courses offered, dates of sessions, schedule of classes, requirements for graduation, a roster of the undergraduate students and a roster of the last graduating class. The catalogue or brochure shall contain a list of the departments of the school, the titles of the personnel and a brief summary of each person's qualifications. The curriculum shall include, but not be limited to, four academic years' instruction in the following subjects:

(1) Anatomy
  (a) Embryology
  (b) Histology
  (c) Neuro-anatomy
(2) Physiology and Chemistry
(3) Pathology and Bacteriology
(4) Diagnosis
  (a) Physical
  (b) Differential
  (c) Laboratory

(e) That suitable buildings provided with laboratories equipped for instruction in anatomy, chemistry, physiology, pathology, bacteriology and other areas of learning necessary to the due course of study prescribed by these rules; and that a laboratory equipped with supplies, models, manikins, charts, stereopticon, roentgen-ray and other special apparatus used in teaching the system to treat human ailments without the use of medicine and operative surgery, be provided.

(f) That a working library, easily accessible to students, is maintained from at least 9 a.m. to 5 p.m., with a librarian in constant attendance. The library shall contain a standard medical dictionary, the modern text and reference books, and the files of leading periodicals dealing with the particular system of treating human ailments without the use of medicine and operative surgery.

(g) That the college or institution requires all students to furnish, before matriculation, satisfactory proof of the preliminary education required by the Medical Practice Act.

(h) That full and complete records are kept showing the credentials for admission, attendance, grades and financial accounts of each student.

(i) That admission of transfer students will be limited to honorably dismissed students from another approved college or institution teaching the same system. The transcript of record obtained directly from the transferring school shall be kept on file. It shall be the duty of a college or institution to furnish such a transcript for the benefit of a student subject to honorable dismissal. No credit shall be given a transferred student for final or "senior year" work or for any courses taken by correspondence.

(j) That students shall start class attendance within one week of the start of each session. That credit for completion of a course will not be granted a student who failed to attend 80 per cent of the complete session of the course.

RULE III—HOSPITALS APPROVED FOR INTERNSHIP.

1. A hospital shall, in the judgment of the Department be deemed reputable and in good standing for training interns and intern services when it meets the following standards:

(a) General hospital of 100 beds' capacity, with an average of at least 60 patients daily, with rotating service.

(b) Shall contain at least the departments of internal medicine, surgery, obstetrics and pediatrics; and an organized departmentalized staff, holding meetings monthly for case reviews and study.

(c) Laboratory employing a full-time qualified technician and at least a part-time qualified pathologist, visiting the laboratory at least two days per week.

(d) Radiological department employing a qualified X-ray technician and at least a part-time qualified roentgenologist, visiting the department at least two days per week.

(e) Maintenance of an up-to-date medical library located in a suitable study room available to interns.

(f) Such hospital shall provide and furnish the Department with the names of staff members of the various departments of the hospital.

(g) The hospital, upon the completion of a course of training therein of not less than

twelve months, shall issue its certificate therefor to any such intern or at the request of the Department, such certificate shall include therein, by date, the commencement and the conclusion thereof.

2. An approved internship shall consist of a twelve months' rotating service in medicine, surgery, obstetrics and pediatrics, with an election in medical specialties.

In the event an applicant has received training in excess of the twelve months' period specified by the Medical Practice Act, and if this be in an institution approved by the Department as adequate for specialty training; and if the applicant has received certification by a recognized Medical Specialty Board, and has had two or more years' specialty practice or Military Service; such training and practice may be accepted as the equivalent of a rotating internship.

Any applicant who shall have completed twelve months of clinical training in a hospital, as required by Section 5-1(b) of the Medical Practice Act, and who has been accepted for further training in a specialty or general practice residency program by a hospital or institution approved by the Department for that purpose, shall be deemed to have complied with the requirements of this rule and of the Medical Practice Act in this regard.

RULE IV—APPLICATION FOR EXAMINATION

An applicant for examination for licensure to practice medicine in all of its branches, or any system of treating human ailments without the use of drugs or medicine and without operative surgery, must make application on forms furnished by the Department at least fifteen days prior to the examination and present, in addition:

(a) Recommendations from two Illinois licentiates, or if recommendations are from non-resident practitioners, they must be countersigned by Illinois licentiates who know the original signers.

(b) A recent photograph, passport size, signed by applicant and the two persons licensed to practice the system of treatment of human ailments for which the applicant is seeking a license. A duplicate photograph must be presented with the card of admission at the examination.

(c) The original diploma of graduation from the professional college in which the applicant completed his course of training, or, in lieu of presenting the diploma with the application, the applicant may present it at the examination.

(d) A certified copy of secondary school and professional school studies to be mailed direct to the Department by the schools attended or by the professional schools where the applicant completed the required course of study.

(e) Proof of completion of a rotating internship of twelve months in an approved hospital for applicants seeking admission to examination for license to practice medicine in all of its branches; and, in the case of graduates of medical colleges in countries other than the United States and Canada, who apply for examination after January 1, 1953, proof of rotating internships of one year in approved hospitals in the State of Illinois.

(f) Graduates of foreign medical colleges, after filing applications and credentials with the Department, are required to report for personal interview with the Medical Examining Committee before being admitted to examinations.

(g) Applicants who completed their medical courses in the extramural colleges of Ireland and Scotland shall not be eligible for admission to examinations for licensure under the Illinois Medical Practice Act.

(h) Graduates of European colleges or universities after January 1, 1943, with the exception of certain approved colleges in the British Isles, Denmark, Holland, Norway, Sweden and Switzerland, be not accepted for admission to examinations for licensure under the Illinois Medical Practice Act.

Graduates of such European medical colleges after January 1, 1943 may be considered for admission to Illinois examinations provided they present diplomas of graduation from approved medical colleges in the United States after attendance in such colleges for at least one year; and in addition, have served rotating internships of one year in approved hospitals in the State of Illinois.

RULE V—EXAMINATIONS

1. Examinations for licensure to practice medicine in all of its branches shall be conducted in the English language and shall be in the following theoretical and practical areas of medicine:

Theoretical

Chemistry and Physiology
Anatomy and Histology
Materia Medica & Therapeutics
Pathology & Bacteriology
Diagnosis
Hygiene & Medical Jurisprudence
Obstetrics & Gynecology
Eye, Ear, Nose, & Throat
Surgery
Dermatology, Pediatrics & Neurology

Clinical

Laboratory Diagnosis

Eye, Ear, Nose, & Throat
Surgery
Medicine

2. Examinations for licensure to practice the treatment of human ailments without the use of drugs or medicine and without operative surgery shall be conducted in the English language and shall be in the following theoretical and practical subjects:

Theoretical

Chemistry & Physiology
Anatomy & Histology
Pathology & Bacteriology
Diagnosis
Hygiene & Medical Jurisprudence
Eye, Ear, Nose, & Throat
Dermatology, Pediatrics & Neurology
System of Practice
Obstetrics (for graduates of approved osteopathic colleges)

Practical

System of Practice

3. To be successful applicants must receive general averages of 75% with no grade below 60 in the written examination, and a general average of 75% in the clinical or practical test.

Applicants applying for registration under Sections 12 and 12a of the Medical Practice Act be required to make general averages of 75% in the three subjects required for license to practice medicine and surgery in Illinois.

4. In case of failure in the first and second examinations applicants will be allowed credit on the following examination for all grades of 75 or more; but in case of failure in the third examination they must retake all written subjects at each subsequent examination. It is not required that the clinical or practical part of the examination be repeated after a passing grade of 75 has been received in that part of the examination.

5. Graduates of medical colleges in the United States who apply for license to practice medicine in all of its branches shall be required to pass only a written examination; but graduates of foreign medical colleges, including those in Canada, shall be required to pass the written examination and the practical test.

Applicants who take the regular examination conducted by the Department for licenses as Physicians and Surgeons be excused from taking the clinical test.

6. An applicant for registration as Physician and Surgeon who has been unsuccessful in five examinations will be deemed to be eligible for further examination upon receipt of proof that he has completed one year of residency training in an approved hospital training program in the United States received subsequent to the applicant's fifth failure.

7. An applicant who has been unsuccessful in five examinations for registration as a drugless practitioner will be eligible for reexamination upon receipt of proof that he has completed a course of study of 960 hours in a school which is accredited under the Medical Practice Act. This course must be received subsequent to the applicant's fifth failure.

8. An applicant who furnished proof of a course of study of 240 hours in a school of chiropractic recognized by the Department in order to be eligible for further examination under Section 9a of the Medical Practice Act will be considered as a new applicant and his grades of 75 per cent or more will be carried over to the second and third examinations.

Rule VI—Reciprocity

1. Each applicant for registration through reciprocity, either for the practice of medicine in all of its branches or for the treatment of human ailments without the use of drugs or medicine and without operative surgery, filed on forms provided by the Department, will be considered on its individual merits, provided the state or territory of original licensure grants a like privilege to persons licensed in Illinois.

2. The applicant must furnish proof of at least one year's practice in the state of original licensure unless his practice was interrupted by Military Service, in which case he must file with his application a photostatic copy of his Service Record.

3. If the application is not endorsed by officers of a state or county society it must be endorsed by two Illinois licentiates who hold licenses to practice the same system or method of practice.

4. Graduates of colleges of medicine located outside of the United States or Canada shall not be accepted for licensure by reciprocity, but must pass the regular written and clinical examination conducted by the Department.

5. Any applicant who has failed in a written examination for licensure under the Medical Practice Act will not be accepted for licensure through reciprocity.

6. Applicants for licensure through reciprocity or upon the basis of having passed the National Board Examination must pass a clinical examination.

7. Graduates of chiropractic colleges whose applications for registration in Illinois by reciprocity are approved, shall be required to pass a written examination in theory in addition to a practical test before the chiropractic examiner.

Rule VII—Licensure

1. An examinate who successfully completes his medical examination must secure his certificate of licensure within one year from the date of his examination.

2. The Department will not issue a duplicate

certificate of registration to practice medicine in all of its branches, or to treat human ailments without the use of drugs or medicine and without operative surgery, unless proof satisfactory to the Department and the Committee is presented that the original certificate was destroyed; or in case of change of name when the original certificate is returned for cancellation, together with satisfactory legal proof of such change of name.

3. A license to practice medicine in Illinois shall be a requisite for a residency in an Illinois hospital.

RULE VIII—TEMPORARY CERTIFICATES OF REGISTRATION

1. Application must be made on forms furnished by the Department.

2. The approved hospital at which training is to be received must signify to the Department that the hospital will appoint the applicant to the graduate or specialty training in the event he receives a Temporary Certificate of Registration.

3. An approved hospital for graduate or specialty training shall be all hospitals qualified for such training in the judgment of the Department.

4. Research Fellows in Illinois hospitals required to apply for Temporary Certificates under Section 11a of the Medical Practice Act.

5. Applicants for Temporary Certificates be advised that their Temporary Certificates are given with the understanding that they are not to be considered or used as a basis of application for permanent registration under the Medical Practice Act of the State of Illinois. Any application for permanent registration under such Act will be processed under the provisions of the Act and the rules and regulations of the Department of Registration and Education as applied to all other applicants seeking permanent registration in Illinois.

6. A person who has a pending application to take the examination may be issued a Temporary Certificate, but in such event, he is not admissable to the examination until after he completes the course for which a Temporary Certificate is sought.

7. A person who leaves a residency program before its completion may be admitted to the examination, but in such event, he will not be eligible for another Temporary Certificate if he should fail the examination and thereafter apply for another Temporary Certificate.

8. A person who completes a course of residency training under a Temporary Certificate and thereafter takes the examination and fails may be issued a Temporary Certificate to pursue another program of training and Rules 6 and 7 will then apply.

RULE IX—LIMITED LICENSES TO PRACTICE IN STATE HOSPITALS

1. Each application made on forms provided by the Department will be considered on its own merits.

2. The State Hospital at which the applicant will practice under the supervision of a medical officer, shall signify to the Department that the hospital will appoint the applicant in the event he received a Limited License.

3. Any applicant for a Limited License who has failed in more than three examinations for licensure under the Illinois Medical Practice Act shall not be eligible for a Limited License.

OTHER EXAMINING BOARDS

Other examining boards operating under the jurisdiction of the Department of Registration and Education are:

Chiropodists

Dr. Charles H. Delano, Springfield
Dr. Theodore S. Hollingsworth, Oak Lawn

Optometrists

Dr. C. W. Duncan, Rockford
Dr. James K. Finley, Decatur
Dr. Thomas M. McGuire, Chicago
Dr. Clarence J. Strobel, Chicago
Dr. Wayne B. Cox, Edwardsville

Dentists

Dr. Eugene E. Ausbrook, East St. Louis
Dr. Hugh D. Burke, Dixon
Dr. Carl Greenwald, Chicago
Dr. Jacob Gerchgall, Chicago
Dr. Robert I. Humphrey, Chicago
Dr. William Podesta, Mattoon
Dr. William O. Vopata, Riverside

Physical Therapists

Miss Vilma Evans, Danville
H. Worley Kendell, M.D., Peoria
Mrs. Viola B. Newman, Hines
Kenneth Stegman, M.D., Harvey
Mrs. Lyndell D. Zimmerman, Springfield

Psychologists

Dr. Philip Ash, Chicago
Dr. Roy Brener, Hines
Dr. Ralph W. Heine, Chicago
Dr. Lloyd G. Humphreys, Urbana
Dr. Benton J. Underwood, Evanston

Pharmacists

Milton G. Christy, Pekin
Joseph Davidson, Carrollton
Dr. James E. Gearien, Chicago
Aloysius J. Neizgodski, Chicago
Harold W. Pratt, Des Plaines
Benjamin B. Rosen, Chicago
David W. Watt, Springfield

Nurses

Sister M. Amata, Chicago
Mrs. Lucile Broadwell, Westchester
Miss Katherine R. Dick, Peoria
Miss Carolyn M. Jurgens, Pekin
Miss Annette Lefkowitz, DeKalb
Miss Aurelia Lehozky, Chicago
Miss Clara May Miller, Edwardsville

DEPARTMENT OF MENTAL HEALTH

401 State Office Bldg.
Springfield
1500 State of Illinois Bldg.
Chicago

Harold M. Visotsky, M.D., Director
Mortimer Brown, Assistant to the Director
Leo Fitzgerald, Administrative Assistant
John P. Reidy, Administrator, Public Information
Jewel J. Short, Supervisor, Data Processing
Robert Lanier, Special Assistant
Charles W. Dixon, Special Assistant
Mrs. Betty Gum, Secretary to the Director
Mrs. Anne Konar, Executive Secretary to the Director

EVALUATION SERVICES

This Department provides services to fill a variety of mental, physical, psychological and educational needs. The department operates some 25 institutions that have a population of nearly 50,000. These institutions provide homes for disabled or aged veterans and for veterans' children and other dependents; furnish educational and rehabilitational opportunities for handicapped children and adults; or offer care and treatment for the mentally ill and retarded. The department's programs also include rehabilitation. Also within the Mental Health Department are a Psychiatric Training and Research Authority to train psychiatric personnel and conduct research on mental health problems, and a Division of Alcoholism. The director of Mental Health has a four-year term overlapping that of the Governor.

DIVISION OF PLANNING AND EVALUATION SERVICES

Leo Levy, Director
Ralph W. Collins, Assistant Division Director
John B. Acheson, Chief, Program and Liaison
Robert F. Warman, Supervisor, Statistics and Statistical Research
Mabel Clarida, Assistant Supervisor, Statistical Research

DIVISION OF MENTAL RETARDATION SERVICES

William Sloan, Division Director
Lawrence Bussard, Assistant Division Director

Institutions

Dixon State School, David Edelson, Superintendent
Lincoln State School, Joseph Albaum, M.D., Superintendent
Warren G. Murray Children's Center, Sol S. Silverman, Superintendent

DIVISION OF PROFESSIONAL SERVICES

Thomas J. Clark, Chief, Activity Therapy Services
Lucy Fairbank, Assistant Chief, Activity Therapy Services
Paul A. Rittmanic, Chief, Speech and Hearing Services
Mrs. Louis A. Meyer, R.N., Assistant Chief, Nursing Service
Mrs. Annette Calloway, Chief, Psychiatric Social Work
Glen Allison, Assistant Chief, Psychiatric Social Work
Mrs. Margaret Diamond, Assistant Chief, Psychiatric Social Work
Mrs. Frances Perce, Acting Chief, Psychology Service
Rudyard Propst, Chief, Rehabilitation Service
Lyman Samo, Chief, Special Education Service
Ira D. Craven, Chief, Veterans' Service
Miss Jane Phillips, Chief, Volunteer Services
Paul Hletko, M.D., Chief, Medical Service
Paul Hletko, M.D., Forensic Psychiatry
Frederick Plotke, M.D., Chief, Public Health Service
A. A. Kaluzny, M.D., Tuberculosis Control
C. P. Maculuso, Chief, Clinical Laboratories

DIVISION OF COMPREHENSIVE MENTAL HEALTH SERVICES

Zones

Rockford: Norris Hansell, M.D., Director
H. Douglas Singer Zone Center, 4402 N. Main St., Rockford
Chicago: Arthur Woloshin, M.D., Director
Charles F. Read Zone Center, 4200 Oak Park Ave., Chicago
Chicago: Bernard Rubin, M.D., Director
John J. Madden Zone Center, Hines
Peoria: Thomas T. Tourlentes, M.D., Director
George A. Zeller Zone Center, 43227 N. University St., Peoria
Springfield:
Andrew McFarland Zone Center, R. R. 4, Springfield
Champaign:
Adolf Meyer Zone Center (adults), R. R. 1, Decatur
Herman M. Adler Zone Center, S. First St., R. R. 2, Champaign
Carbondale: Robert C. Steck, M.D., Director

Hospitals and Clinics

Alton State Hospital, Abraham Simon, M.D., Superintendent
Anna State Hospital, Robert C. Steck, M.D., Superintendent
Chicago Mental Health Center, Arthur Woloshin, M.D., Superintendent
Chicago State Hospital, J. Herbert Maltz, M.D., Superintendent
East Moline State Hospital, Konstantin Dimitri, M.D., Superintendent
Elgin State Hospital, Ernest S. Klein, M.D., Superintendent
Galesburg State Research Hospital, Thomas T. Tourlentes, M.D., Superintendent
Illinois Security Hospital, Bert Rednour, Superintendent
Jacksonville State Hospital, Sophie Leschin, M.D., Superintendent
Kankakee State Hospital, Gabriel Misevic, M.D., Superintendent
Manteno State Hospital, Richard J. Graff, M.D., Superintendent
Peoria State Hospital, Don Cameron, M.D., Assistant Superintendent
Tinley Park State Hospital, John L. Cutler, M.D., Superintendent

Community Services

Charles R. Meeker, Administrator
B. W. Tucker, Chief, Mental Health Education
Robert Dahl, Assistant Chief, Mental Health Education
Joseph B. Lehmann, Consultant, Community Mental Health Clinics
William K. Murphy, Consultant, Day Program for Mentally Retarded
Catherine Morgan, Supervisor, Licensed Private Facilities

Interstate Services

Muriel Rietz, Chief

Alcoholism Programs

Richard F. Cook, M.D., Chief
William Becker, Assistant Chief
Gerard Littman, Warren Clinic
Peoria State Hospital, Intensive Treatment Unit

MEDICAL CENTER COMPLEX

Institute for Juvenile Research

Raymond E. Robertson, M.D., Director
Noel Jenkin, Director of Research
Downtown Research Branch
William Healy School
Zone Programs, Children's Clinical Services

Illinois State Pediatric Institute

Herbert J. Grossman, M.D., Director
H. David Mosier, M.D., Director of Research

Illinois State Psychiatric Institute

Lester H. Rudy, M.D., Director
Robert C. Drye, M.D., Director of Education

DIVISION OF RESEARCH SERVICES

Percival Bailey, M.D., Division Director
Leon White, Administrator, Mental Health Fund Program-Staff Training

DIVISION OF PERSONNEL SERVICES

Leslie T. Thornton, Assistant Division Director (Procedures)
Myrna Kassel, Assistant Division Director (Programs)

DIVISION OF ADMINISTRATION AND FINANCE

E. F. Merton, Deputy Director, General Services
Robert H. Sipes, Deputy Director, Physical Plant Services
Frank F. Campbell, Deputy Director, Reimbursement Service

STATUTORY BOARDS

1. Board of Mental Health Commissioners

Alex Elson, Chicago, Chairman
Emmet F. Pearson, M.D., Springfield
Rabbi Ralph Simon, Chicago
John Adam Svetina, Chicago
Willard King, Chicago
Mrs. James Holland, Rockford
Curtis Small, Harrisburg
Mrs. L. Trimble Steinbrecher, Chicago, Executive Secretary

2. Psychiatric Training and Research Authority

Roy R. Grinker, M.D., Chicago, Chairman
William H. Haines, M.D., Chicago, Secretary
Paul C. Bucy, M.D., Chicago
Paul E. Nelson, M.D., Chicago
Noble H. Kelly, Carbondale
Jules H. Masserman, M.D., Evanston
Peter J. Talso, M.D., Chicago
Ex-Officio—Harold M. Visotsky, M.D., Director of Mental Health; Alex Elson, Chairman, Board of Mental Health Commissioners; Herbert J. Grossman, M.D., Director, Illinois State Pediatric Institute; Lester H. Rudy, M.D., Director, Illinois State Psychiatric Institute
Percival Bailey, M.D., Chicago, Executive Secretary

STATUTORY BOARD—ADMINISTRATIVE APPOINTMENT

Psychiatric Advisory Council

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H. H. Garner, M.D., Chicago, Vice Chairman
Roy R. Grinker, M.D., Chicago
John F. Kenward, M.D., Chicago
Gerhart Piers, M.D., Chicago
Melvin Sabshin, M.D., Chicago
Ex-Officio—Harold M. Visotsky, M.D., Director of Mental Health
Percival Bailey, M.D., Chicago, Executive Secretary

ADVISORY COMMITTEE ADMINISTRATIVE APPOINTMENT

1. Advisory Board to Division of Alcoholism

Marvin F. Burt, Freeport, Chairman
Paul B. Musgrove, Peoria, Secretary
J. Milton Guy, Chicago
George E. Moredock, Jr., Chicago
James H. Oughton, Jr., Dwight
Jackson A. Smith, M. D., Chicago
Guy A. Renzaglio, Carbondale
Paul Hletko, M.D., Chicago

2. Committee on Chest Diseases

Edward A. Piszczek, M.D., Hinsdale, Chairman
William Adams, M.D., Chicago
Kenneth G. Bulley, M.D., Aurora
Clifton Hall, M.D., Springfield
Roger A. Harvey, M.D., Chicago
William Lees, M.D., Chicago
Dan Morse, M.D., Peoria
Herman C. Rogers, M.D., Mt. Vernon
Darrell H. Trumpe, M.D., Springfield
George C. Turner, M.D., Chicago
Ex-Officio—Harold M. Visotsky, M.D., Director of Mental Health; A. A. Kaluzny, M.D., Public Health Service, Department of Mental Health

3. Advisory Committee on Grants to Local Communities for Mental Health Services

Mrs. Bernice T. Van der Vries, Evanston, Chairman
Mrs. W. J. Bryan, Rockford
Rt. Rev. Msgr. William J. Cassin, Springfield
Louis deBoer, Chicago
Robert L. Farwell, Chicago
Vernon F. Frazee, Springfield
The Very Rev. Gordon E. Gillett, Peoria
Rabbi Joseph L. Ginsberg, Highland Park
Donaldson F. Rawlings, M.D., Springfield
Mrs. H. Langdon Robinson, Springfield
Groves B. Smith, M.D., Alton
Harry Wright, M.D., Metropolis

4. Institute for Juvenile Research Advisory Board

Val Cox, Collinsville, Chairman
Mrs. James Errant, Elgin, Vice Chairman
John J. Bresee, Champaign
Rt. Rev. Msgr. William J. Cassin, Springfield
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The Very Rev. Gordon E. Gillett, Peoria
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Milo Pritchett, East St. Louis
Lawrence K. Schnadig, Highland Park
Norman C. Sleezer, Freeport
Lloyd G. Wheeler, Chicago

DIVISION OF VOCATIONAL REHABILITATION

Under the direction and control of the State Board of Vocational Education and Rehabilitation—the Division work for the rehabilitation and placement in remunerative employment persons with physical or mental impairment which constitutes a substantial handicap for self-care or remunerative employment. One of the major duties of the Board is to prescribe and supervise such courses in vocational training and provide such other services as may be necessary for the rehabilitation of persons disabled and to cooperate with the state and local school authorities and other recognized agencies engaged in vocational education and rehabilitation.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
503 State Office Bldg.
Springfield

Franklin D. Yoder, M.D., M.P.H., Director
E. L. Wittenborn, M.P.H., Assistant to the Director

As provided by statute, the Department of Public Health has general supervision over the protection of the health of the citizens of Illinois. The department conducts programs for the prevention of cancer, heart disease, tuberculosis, and other types of disease; carries on an extensive health education program, and collects Illinois vital statistics data.

The Department of Sanitary Engineering Unit conducts inspectional and experimental programs pertaining to the state's water supply, conducts stream pollution investigations and inspects dairies. The department performs consultive service for local health departments and directs services provided for those areas of the state without organized health departments.

DIVISION OF GENERAL ADMINISTRATION

E. L. Wittenborn, M.P.H., Chief

Bureaus

Administration
Accounting and Finance
Health Education
Nursing
Statistics

Chicago Office—1919 W. Taylor St.

DIVISION OF DENTAL HEALTH

William J. Greek, D.D.S., M.P.H., Chief

DIVISION OF HOSPITALS AND CHRONIC ILLNESS

R. F. Sondag, M.D., M.P.H., Chief

Bureaus

Chronic Illness
Heart Disease Control Section
Cancer Control Section

Geriatrics
Nursing Home Section
Hospitals

DIVISION OF MILK CONTROL

Enos G. Huffer, Chief

DIVISION OF LABORATORIES

Howard J. Shaughnessy, Chief

Bureaus

Biologic Products
Diagnostic Services
Laboratory Evaluation
Sanitary Bacteriology
Toxicology
Virus Diseases and Research

Laboratories

126½ N. Fifth St., Springfield
Capitol Bldg., Springfield
Oakland & Chautauqua Sts., Carbondale
505 S. Fifth St., Champaign
1800 W. Fillmore, Chicago
414 Missouri Ave., East St. Louis
121 Fourth Ave., Rock Island

DIVISION OF PREVENTIVE MEDICINE

D. F. Rawlings, M.D., M.P.H., Chief

Bureaus

Epidemiology
Section on Veterinary Public Health
Hazardous Substances and Poison Control
Maternal and Child Health

DIVISION OF SANITARY ENGINEERING

Clarence W. Klassen, Chief

Bureaus

General Sanitation
Public Water Supplies
Radiological Health and Air Pollution
Special Services
Stream Pollution
Chicago Office—Sanitary Water Board

DIVISION OF TUBERCULOSIS CONTROL

Clifton Hall, M.D., M.P.H., Chief
Chicago State Tuberculosis Sanitarium
Mt. Vernon State Tuberculosis Sanitarium

DIVISION OF LOCAL HEALTH SERVICES

Charles F. Sutton, M.D., M.P.H., Chief

Sections

Civil Defense
Community Health Services Promotion

STATUTORY BOARDS AND COMMISSIONS

(Allied with Public Health Operations)

1. ILLINOIS LEGISLATIVE COMMISSION ON ATOMIC ENERGY

Ex Officio:

Director of Agriculture
Director of Mental Health
Director of Labor
Director of Public Health
Director of Civil Defense
Chairman of Commerce Commission

2 House Members—2 Senate Members:

Murray Joslin, Chicago
David Ferguson, Chicago
Harvey Pearson, River Grove
John F. Ryan, Westchester

Robert J. Hasterlik, M.D., Chicago
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3. AIR POLLUTION CONTROL BOARD

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4. OHIO RIVER VALLEY WATER SANITATION COMMISSION

Franklin D. Yoder, M.D., Springfield
Maurice Gosnell, Lawrenceville
Clarence W. Klassen, Springfield

5. COMMISSION ON CLINICAL LABORATORIES, BLOOD BANKS AND BLOOD BANK DEPOSITORIES

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Rep. Charles O. Miller, Chicago
Rep. Elroy C. Sandquist, Chicago
Sen. Harris W. Fawell, Naperville
Sen. Thad L. Kusibab, Chicago
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Paul Van Pernis, M.D., Rockford
Edward McGrath, Peoria
R. F. Sondag, M.D., Springfield
Franklin D. Yoder, M.D., Springfield

STATUTORY

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Edwin F. Hirsch, M.D., Chicago
Grant C. Johnson, M.D., Springfield
Representative Bernard McDevitt, Chicago
James S. Thompson, Seneca
Andrew J. Toman, M.D., Chicago
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2. PUBLIC WATER SUPPLY OPERATORS' ADVISORY BOARD

William R. Mize, Belleville
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W. R. Gelston, Quincy
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3. MIGRANT LABOR ADVISORY COMMITTEE

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Albert J. Cross, Bloomington
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Phillip Collins, Morris
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Miss Naomi Hiett, Springfield

4. RADIATION PROTECTION ADVISORY COUNCIL

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Ormas G. Smith, Chicago
Robert M. Schneider, Springfield
Robert J. Hasterlik, M.D., Chicago
John E. Rose, Argonne
John E. Cullerton, Chicago
James W. Karber, Springfield

5. ADVISORY HOSPITAL COUNCIL

Franklin D. Yoder, M.D., Springfield
Harold M. Visotsky, M.D., Springfield
Harold Swank, Springfield
Rt. Rev. Msgr. John W. Barrett, Chicago
George K. Hendrix, Springfield
David M. Kinzer, Chicago
Everett Coleman, M.D., Canton
Francis E. Bihss, M.D., East St. Louis
John B. O'Donoghue, Sr., M.D., Chicago
William R. Williams, Hinsdale
Leonard P. Goudy, Peoria
Dr. Edward C. Thompson, Urbana
Harris Perlstein, Chicago
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Rt. Rev. Msgr. Clement Schindler, Belleville
Jack B. Edmundson, Carbondale
Harlan English, M.D., Danville
Emil O. Stahlhut, Lincoln
Elmer E. Abrahamson, Chicago

7. CANCER ADVISORY BOARD

Caesar Portes, M.D., Chicago
David F. Rendleman, M.D., Carbondale
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Carl E. Clark, M.D., Sycamore
Henry Glover, M.D., Mattoon

8. BOARD OF PUBLIC HEALTH ADVISORS

E. A. Piszczek, M.D., Forest Park
John A. D. Cooper, M.D., Evanston
Robert G. Kesel, D.D.S., Chicago
Carl A. Brandly, D.V.M., Urbana
Alex Van Praag, Decatur
Mrs. F. W. Specht, Wheaton
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NON-STATUTORY

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Robert J. Cyrog, D.V.M., Skokie
Guy N. Flater, Jr., D.V.M., Galesburg
John D. Clayton, D.V.M., Polo
Paul B. Doby, D.V.M., Springfield
Merrill W. G. Ottwein, D.V.M., Edwardsville
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Gilbert Gibson, Chicago
Vernon Jones, Champaign
George Baker, Moline
Bernard Szidon, Peoria
Orville Isaacs, Sullivan
Clyde Fruit, Edwardsville
Louis Weiner, Chicago
Fred Nonnamaker, Chicago
Floyd M. Keller, Chicago
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C. V. Christiansen, Chicago
J. C. Wilson, Harrisburg
Willard J. Corbett, M.D., Rockford
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L. K. Wallace, Bloomington
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3. ADVISORY NURSING HOMES AND HOMES FOR THE AGED COUNCIL

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The Rev. Edward J. Reeb, East St. Louis
Mrs. Florence Baltz, Washington
William J. Cowhey, Springfield
Miss Leslie Freeman, Chicago
Adeline M. Jorstad, R.N., Joliet
The Rev. B. W. Selin, Chicago
P. V. Dilts, M.D., Springfield
Bernice Hover, R.N., Chicago
Clarence C. Schmoldt, Roselle
Arthur A. Almon, Chicago

4. POLIOMYELITIS TECHNICAL ADVISORY COMMITTEE

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E. A. Piszczek, M.D., Forest Park
John B. Hall, M.D., Chicago
H. J. Shaughnessy, Chicago
Edward Press, M.D., Evanston
Herbert Ratner, M.D., Oak Park
Samuel L. Andelman, M.D., Chicago
George F. Lull, M.D., Chicago
John L. Reichert, M.D., Chicago
Jackson P. Birge, M.D., Rock Island
Albert Wolf, M.D., Chicago
W. L. Crawford, M.D., Rockford

5. COMMITTEE FOR REVISION OF THE RULES AND REGULATIONS FOR THE CONTROL OF COMMUNICABLE DISEASES

Norman J. Rose, M.D., Springfield
H. J. Shaughnessy, Chicago
John B. Hall, M.D., Chicago
Herbert S. Miller, M.D., Winnetka
Huston J. Banton, M.D., Champaign
L. L. Fatherree, M.D., Champaign
Mark Lepper, M.D., Chicago
Samuel L. Andelman, M.D., Chicago
David P. Richerson, M.D., Johnston City
Edward Press, M.D., Evanston
Homer H. Hanson, M.D., Carbondale
R. F. Sondag, M.D., Springfield

6. ADVISORY COMMITTEE ON PHENYLKETONURIA

William J. Cassel, Jr., M.D., Joliet
Joseph Greer, Chicago
Herbert J. Grossman, M.D., Chicago
Daniel Pachman, M.D., Chicago
Herbert F. Philipsborn, M.D., Glencoe
David Y. Hsia, M.D., Chicago
Ira M. Rosenthal, M.D., Chicago

EX-OFFICIO MEMBERS
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Miss Iva Aukes
George F. Forster, M.D.
Nathan Nagle

7. ADVISORY COMMITTEE ON HAZARDOUS SUBSTANCES

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R. Chapman, Chicago
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9. ILLINOIS COMMITTEE FOR MEDICAL RESIDENCIES IN PUBLIC HEALTH

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John B. Hall, M.D., Chicago
Charles A. Lang, M.D., Wheaton
Mark H. Lepper, M.D., Chicago
Fred P. Long, M.D., Peoria
Edward A. Piszczek, M.D., Forest Park
Donaldson F. Rawlings, M.D., Springfield
Howard J. Shaughnessy, Chicago
Charles F. Sutton, M.D., Springfield
Eugene L. Wittenborn, Springfield

REGIONAL OFFICES

Northeastern: Counties of Boone, DeKalb, Grundy, Kane, Kankakee, Kendall, LaSalle, McHenry, and Winnebago and consultation to full-time health departments of Cook, DuPage, Lake, and Will Counties; cities of Evanston and Rockford; villages of Oak Park and Winnetka-Glencoe-Kenilworth-Northfield; Hygienic Institute of LaSalle-Oglesby-Peru, and Stickney Township Public Health District

East Central: Counties of Champaign, Clark, Coles, Crawford, Cumberland, Douglas, Edgar, Ford, Iroquois, Jasper, Livingston, Moultrie, and Vermilion counties and consultation to full-time health departments of DeWitt-Piatt, Effingham, McLean, and Shelby counties, and

to the Champaign-Urbana Public Health District

Northwestern: Counties of Bureau, Carroll, Hancock, Henderson, Henry, Knox, Marshall, McDonough, Mercer, Ogle, Putnam, Rock Island, Stark, Stephenson, Tazewell, Warren, Whiteside, and Woodford and consultation to full-time health departments of Jo Daviess, Lee, and Peoria counties and to the city of Peoria

West Central: Counties of Bond, Brown, Calhoun, Cass, Christian, Clinton, Fayette, Greene, Jersey, Logan, Macon, Macoupin, Madison, Mason, Menard, Pike, St. Clair, Sangamon, Schuyler, and Scott and consultation to full-time health departments of Adams, Fulton, Montgomery, and Morgan counties, the city of Decatur, and the East Side Health District of Canteen - Centreville - East St. Louis-Stites townships

Southern: Counties of Clay, Edwards, Hamilton, Jefferson, Marion, Monroe, Perry, Randolph, Richland, Wabash, Washington, and Wayne and consultation to full-time health departments of Gallatin-Saline-White, Franklin-Williamson, Jackson, Lawrence, Hardin-Johnson-Massac-Pope, and Alexander-Pulaski-Union counties.

FULL-TIME COUNTY DEPARTMENTS IN ILLINOIS

Adams County, Wayne Messick, M.P.H., 333 N. 6th, Quincy

Cook County, John B. Hall, M.D., M.P.H., 329 S. Wood St., Chicago
North District, 1755 Oakton St., DesPlaines
South District, 51 E. 154th St., Harvey
Southwest District, 5410 W. 95th St., Oak Lawn
West District, 1907-09 Rice St., Melrose Park

DeWitt-Piatt Counties, Lelia V. Hyde, R.N., 122 E. Main St., Clinton
Piatt County, Courthouse, Monticello

DuPage County, Charles A. Lang, M.D., M.P.H., 222 E. Willow Ave., Wheaton

Effingham County, Peter C. Supan, M.D., M.P.H., 112 E. Section Ave., Effingham

Gallatin-Saline-White Counties, Ann E. Clarke, M.D., 1333 Locust St., Eldorado
White County, 208 N. Church, Carmi
Gallatin County, Courthouse, Shawneetown

Franklin-Williamson Counties, David P. Richerson, M.D., M.P.H., 217 E. Broadway, Johnson City
Franklin County, 226 N. Main, Benton

Fulton County, Wilma Sturgeon, R.N., 31 S. Main St., Canton

Jackson County, Kathleen Bahn, P.H.N., 1015½ Chestnut St., Murphysboro

Jo Daviess County, Albert L. Hildinger, M.D., 311 S. Main St., Galena

Lake County, Arthur G. Baker, M.D., M.P.H., 2307 Grand Ave., Waukegan
West Suboffice, 330 N. Milwaukee Ave., Libertyville

Lawrence County, Maxine Jackman, R.N., Courthouse, Lawrenceville

Lee County, Robert C. Miles, D.D.S., M.P.H., 316 W. Third St., Dixon

Macon County, Leo Michl, Jr., 1085 S. Main, Decatur

McLean County, E. E. Diddams, M.S.P.H., 318 E. Locust St., Bloomington

Montgomery County, Willis L. Whitlock, Box 149, Hillsboro

Morgan County, James W. Chapman, M.D., 234½ W. State St., Jacksonville

Peoria County, Fred Long, M.D., M.P.H., 2114 N. Sheridan Rd, Peoria

Hardin-Johnson-Massac-Pope Counties, Harry Wright, M.D., M.P.H., Box 437, Golconda
Massac County, Courthouse, Metropolis
Johnson County, Vienna
Hardin County, Gross Building, Elizabethtown

Shelby County, Peter C. Supan, M.D., M.P.H., 123 N. Broadway, Shelbyville

Alexander-Pulaski-Union Counties, Genevieve Hillerman, R.N., 1115 Cedar St., Cairo
Union County, Jonesboro

Will County, William J. Cassel, Jr., M.D., M.P.H., 21 E. Van Buren St., Joliet

FULL-TIME CITY AND LOCAL HEALTH DISTRICTS

Champaign-Urbana Public Health District, L. L. Fatherree, M.D., M.P.H., 505 S. Fifth St., Champaign

Chicago Board of Health, Samuel L. Andelman, M.D., M.P.H., 54 W. Hubbard St., Chicago

East Side Health District (Canteen-Centreville-East St. Louis-Stites Townships), John J. Gregowicz, M.D., 638 N. 20th St., East St. Louis

Evanston Department of Health, William J. Hixon, Box 870, Evanston

Hygienic Institute (LaSalle - Oglesby - Peru), Arlington Ailes, M.D., M.P.H., LaSalle

Oak Park Department of Public Health, Herbert Ratner, M.D., Box 31, Oak Park

Peoria Department of Health, Fred Long, M.D., M.P.H., 2116 N. Sheridan Rd., Peoria

Rockford Department of Public Health, Arlo J. Anderson, City Hall Bldg., Rockford

Stickney Township Public Health District, Gene J. Franchi, D.D.S., M.P.H., 5635 State Rd., Oak Lawn

Winnetka - Glencoe - Kenilworth - Northfield Villages Health Department, Herbert S. Miller, M.D., M.P.H., Village Hall, Winnetka

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
DIVISION OF PREVENTIVE MEDICINE
POISON CONTROL CENTERS

AURORA
- Copley Memorial Hospital
- St. Charles Hospital

BELLEVILLE
- Memorial Hospital

BERWYN
- MacNeal Hospital

BLOOMINGTON
- Mennonite Hospital
- St. Joseph Hospital

CAIRO
- St. Mary Hospital

CANTON
- Graham Hospital

CARBONDALE
- Doctors Hospital

CHAMPAIGN
- Burnham City Hospital

CHESTER
- Memorial Hospital

CHICAGO
- Bob Roberts Memorial Hospital
- Children's Memorial Hospital
- Cook County Hospital
- Illinois Research Hospital
- Mercy Hospital
- Michael Reese Hospital
- Mt. Sinai Hospital
- Municipal Contagious Hospital
- Presbyterian-St. Luke's Hospital
- Resurrection Hospital

DANVILLE
- St. Elizabeth Hospital
- Lake View Memorial Hospital

DECATUR
- Decatur-Macon County Hospital
- St. Mary Hospital

DES PLAINES
- Holy Family Hospital

EAST ST. LOUIS
- Christian Welfare Hospital
- St. Mary Hospital

EFFINGHAM
- St. Anthony Hospital

ELGIN
- Sherman Hospital
- St. Joseph Hospital

ELMHURST
- Memorial Hospital of DuPage County

EVANSTON
- Community Hospital
- Evanston Hospital
- St. Francis Hospital

EVERGREEN PARK
- Little Company of Mary Hospital

FAIRBURY
- Fairbury Hospital

FREEPORT
- Freeport Memorial Hospital
- St. Francis Hospital

GALENA
- Northwestern Illinois Community Hospital

GALESBURG
- Galesburg Cottage Hospital
- St. Mary Hospital

GRANITE CITY
- St. Elizabeth Hospital

HARVEY
- Ingalls Memorial Hospital

HIGHLAND PARK
- Highland Park Hospital

HINSDALE
- Hinsdale Hospital

HOOPESTON
- Hoopeston Community Memorial Hospital

JACKSONVILLE
- Passavant Memorial Hospital

JOLIET
- St. Joseph Hospital
- Silver Cross Hospital

KANKAKEE
- St. Mary Hospital

KEWANEE
- Kewanee Public Hospital

LAKE FOREST
- Lake Forest Hospital

LaSALLE
- St. Mary Hospital

LIBERTYVILLE
- Condell Memorial Hospital

LINCOLN
- Abraham Lincoln Memorial Hospital

MACOMB
- McDonough Community Hospital

MATTOON
- Memorial District Hospital of Coles County

McHENRY
- McHenry Hospital

MELROSE PARK
- Westlake Hospital

MENDOTA
- Mendota Community Hospital

MOLINE
- Moline Public Hospital

MONMOUTH
- Monmouth Hospital

MT. CARMEL
- Wabash General Hospital

MT. VERNON
- Good Samaritan Hospital

NAPERVILLE
- Edward Hospital

NORMAL
- Brokaw Hospital

OAK LAWN
- Christ Community Hospital

OAK PARK
- West Suburban Hospital

OLNEY
Richland Memorial Hospital
OTTAWA
Ryburn Memorial Hospital
PARK RIDGE
Lutheran General Hospital
PEKIN
Pekin Public Hospital
PEORIA
Methodist Hospital
Proctor Community Hospital
St. Francis Hospital
PERU
Peoples Hospital
QUINCY
Blessing Hospital
St. Mary Hospital
ROCKFORD
Memorial Hospital
St. Anthony Hospital
Swedish-American Hospital
ROCK ISLAND
St. Anthony Hospital
SPRINGFIELD
Memorial Hospital
St. John Hospital
URBANA
Carle Hospital
Mercy Hospital
WAUKEGAN
St. Therese Hospital
Victory Memorial Hospital
WOODSTOCK
Memorial Hospital for McHenry County
ZION
Zion-Benton Hospital

HOSPITALS

The Illinois Department of Public Health is responsible for implementing the Hospital Licensing Act, excerpts from which follow:

Section 2. The purpose of this Act is to provide for the better protection of the public health through the development, establishment, and enforcement of standards (1) for the care of individuals in hospitals, and (2) for the construction, maintenance, and operation of hospitals which, in light of advancing knowledge, will promote safe and adequate treatment of such individuals in hospitals.

Hospital Licensing Requirements

To implement the Hospital Licensing Act, the Department of Public Health has pertinent requirements. The following cover the medical staff:

1. The medical staff shall be composed only of physicians and dentists licensed by the Illinois Department of Registration and Education in accordance, respectively, with provisions of the Medical Practice Act and Dental Practice Act.

2. The medical staff shall be organized in accordance with written bylaws, rules and regulations, approved by the governing board. The bylaws, rules and regulations shall specifically provide:

a. for eligibility for staff membership;
b. for such divisions and departments as are warranted; (as a minimum, Active and Consulting divisions are required)
c. for such officers and/or committees as are warranted; (a medical records committee is required)
d. for determination of qualifications and privileges;
e. that medical staff meetings be held regularly, and that written minutes of all meetings be kept;
f. for review and analysis of the clinical experience of the hospital at regular intervals —the medical records of patients to be the basis for such review and analysis;
g. that tissue removed at operation shall be examined by a qualified pathologist and that the findings shall be made a part of the patient's medical record;
h. for consultation between medical staff members in complicated cases; and
i. for keeping complete medical records.

Section B. Supervision of patient care

All persons admitted to the hospital shall be under the professional care of a member of the medical staff.

Section C. Orders for medication and treatment

No medication or treatment shall be given to a patient except on the written order of a member of the medical staff.

Section D. Tissue Examination

All tissue removed at operation shall be examined by a qualified pathologist and the findings shall be made a part of the patient's hospital medical record. A tissue committee of the medical staff is highly recommended.

Section E. Availability for emergencies

The governing board shall provide that one or more physicians shall be available at all times for emergencies.

GENERAL HOSPITALS

(For Identification—see footnote, page 213)

ALEDO (Mercer)
Mercer County Hospital (E-60)
ALTON (Madison)
*Alton Memorial Hospital (B-183)
*St. Anthony's Hospital (B-137)
*St. Joseph's Hospital (B-166)
AMBOY (Lee)
Amboy Public Hospital (B-15)
ANNA (Union)
Union County Hospital District (F-64)
ARLINGTON HEIGHTS (Cook)
*Northwest Community Hospital (B-107)
AURORA (Kane)
*Copley Memorial Hospital (B-200)

*St. Charles Hospital (B-118)
*St. Joseph Mercy Hospital (B-112)
AVON (Fulton)
Saunders Hospital (B-24)
BEARDSTOWN (Cass)
*Schmitt Memorial Hospital (D-50)
BELLEVILLE (St. Clair)
*Memorial Hospital (B-154)
†*St. Elizabeth's Hospital (B-250)
†U. S. Air Force Hospital (J-300)
BELVIDERE (Boone)
*Highland Hospital, Inc. (B-68)
*St. Joseph's Hospital (B-100)
BENTON (Franklin)
*The Franklin Hospital (F-125)
BERWYN (Cook)
*MacNeal Memorial Hospital (B-293)
BLOOMINGTON (McLean)
*Mennonite Hospital (B-125)
*St. Joseph's Hospital (B-160)
BLUE ISLAND (Cook)
*St. Francis Hospital (B-180)
BREESE (Clinton)
*St. Joseph's Hospital (B-41)
CAIRO (Alexander)
*St. Mary's Hospital (B-120)
CANTON (Fulton)
*Graham Hospital Association (B-145)
CARBONDALE (Jackson)
*Doctors Hospital (B-100)
*Holden Hospital (B-55)
CARLINVILLE (Macoupin)
*Carlinville Area Hospital (B-58)
CARMI (White)
*Carmi Township Hospital (H-61)
CARROLLTON (Greene)
Thomas H. Boyd Memorial Hospital (B-49)
CARTHAGE (Hancock)
*Memorial Hospital (B-52)
CENTRALIA (Marion)
*St. Mary's Hospital (B-115)
CHAMPAIGN (Champaign)
*Burnham City Hospital (D-175)
*Cole Hospital (C-60)
CHARLESTON (Coles)
*Charleston Community Memorial Hospital, Inc. (B-46)
CHESTER (Randolph)
Memorial Hospital (F-47)
CHICAGO (Cook)
*Alexian Brothers Hospital (B-239)
*American Hospital of Chicago (B-177)
*Augustana Hospital (B-350)
*Belmont Community Hospital (B-138)
*Bethany Brethren Hospital (B-61)
*Bethany Methodist Hospital (B-160)
*Bethesda Hospital (B-100)
*Central Community Hospital (B-93)
†*Chicago Wesley Memorial Hospital (B-651)
*Columbus Hospital (B-413)
†*Cook County Hospital (E-2,747)
†*Doctors General Hospital (B-104)
*Edgewater Hospital, Inc. (B-343)
*Englewood Hospital (B-159)
*Evangelical Hospital of Chicago (B-173)
*Forkosh Memorial Hospital (B-94)
Frank Cuneo Hospital (B-174)
*Franklin Boulevard Community Hospital (B-110)
*Garfield Park Community Hospital (B-139)
†*Grant Hospital of Chicago (B-260)
*Henrotin Hospital (B-100)
*Holy Cross Hospital (B-138)
*Hospital of St. Anthony de Padua (B-208)
Ida Mae Scott Hospital (B-15)
*Illinois Central Hospital (B-310)
*Illinois Masonic Hospital (B-473)
*Jackson Park Hospital (C-167)
†*Loretto Hospital (B-167)
*Louis A. Weiss Memorial Hospital (B-250)
*Louise Burg Hospital (B-108)
*Lutheran Deaconess Hospital (B-180)
*Martha Washington Hospital (B-58)
*Mary Thompson Hospital (B-112)
†*Mercy Hospital (B-350)
†*Michael Reese Hospital and Medical Center (B-866)
Michigan Avenue Hospital (B-99)
†*Mount Sinai Hospital of Chicago (B-389)
*Northwest Hospital, Inc. (C-106)
*Norwegian-American Hospital, Inc. (B-228)
†*Passavant Memorial Hospital (B-317)
†*Presbyterian-St. Luke's Hospital (B-844)
*Provident Hospital and Training School (B-204)
*Ravenswood Hospital Association (B-285)
*Resurrection Hospital (B-252)
*Roosevelt Memorial Hospital (B-100)
*Roseland Community Hospital (B-131)
*St. Anne's Hospital (B-305)
*St. Bernard's Hotel Dieu (B-178)
*St. Elizabeth's Hospital (B-289)
*St. Frances Xavier Cabrini Hospital (B-150)
Formerly Mother Cabrini Memorial Hospital
*St. George Hospital (B-129)
*St. Joseph Hospital (B-204)
*St. Mary of Nazareth Hospital (B-280)
*South Chicago Community Hospital (B-300)
*South Shore Hospital (B-189)
*Swedish Covenant Hospital (B-220)
U. S. Public Health Service Hospital (J-155)
†*University of Chicago Hospitals and Clinics (B-711)
†*University of Illinois Research and Educational Hospitals (I-603)
†Veterans Administration Research Hospital (J-516)
†Veterans Administration West Side Hospital (J-505)
*The von Solbrig Memorial Hospital, Inc. (A-80)
*Walther Memorial Hospital (B-169)
*Woodlawn Hospital (B-143)
CHICAGO HEIGHTS (Cook)
*St. James Hospital (B-250)

CHRISTOPHER (Franklin)
*The Miners Hospital (B-36)
CLIFTON (Iroquois)
Central Hospital (B-21)
CLINTON (DeWitt)
John Warner Hospital (D-44)
DANVILLE (Vermilion)
*Lake View Memorial Hospital (B-221)
*St. Elizabeth Hospital (B-188)
DECATUR (Macon)
*Decatur and Macon County Hospital (B-362)
*St. Mary's Hospital (B-356)
*Wabash Employees' Hospital (B-68)
DE KALB (DeKalb)
*DeKalb Public Hospital (D-90)
*St. Mary's Hospital (B-50)
DES PLAINES (Cook)
*Holy Family Hospital (B-175)
DIXON (Lee)
*Dixon Public Hospital (B-120)
DOLTON (Cook)
Thomsen Clinic Hospital (B-6)
DU QUOIN (Perry)
*Marshall Browning Hospital (B-68)
DWIGHT (Livingston)
Veterans Administration Hospital (J-215)
EAST ST. LOUIS (St. Clair)
*Centreville Township Hospital (H-163)
*Christian Welfare Hospital (B-194)
*St. Mary's Hospital (B-356)
EFFINGHAM (Effingham)
*St. Anthony Memorial Hospital (B-126)
ELDORADO (Saline)
Ferrell Hospital (C-49)
Pearce Hospital Foundation (B-35)
ELGIN (Kane)
*St. Joseph Hospital (B-150)
*Sherman Hospital (B-268)
ELMHURST (DuPage)
*Memorial Hospital of DuPage County (B-316)
EUREKA (Woodford)
*Eureka Hospital (C-31)
EVANSTON (Cook)
*Community Hospital of Evanston (B-54)
†*Evanston Hospital Association (B-410)
*Northwestern University Student Health Service Hospital (B-44)
*St. Francis Hospital (B-401)
EVERGREEN PARK (Cook)
†*Little Company of Mary Hospital (B-550)
FAIRBURY (Livingston)
*Fairbury Hospital (B-89)
FAIRFIELD (Wayne)
*Fairfield Memorial Hospital (B-94)
FLORA (Clay)
*Clay County Hospital (E-52)
FREEPORT (Stephenson)
*Freeport Memorial Hospital (B-125)
*St. Francis Hospital (B-116)
GALENA (Jo Daviess)
Northwestern Illinois Community Hospital District (F-31)
GALESBURG (Knox)
*Galesburg Cottage Hospital (B-180)
*St. Mary's Hospital (B-134)
GENESEO (Henry)
*Hammond-Henry District Hospital (F-54)
GENEVA (Kane)
*Community Hospital (B-112)
GIBSON CITY (Ford)
*Gibson Community Hospital (B-48)
GRANITE CITY (Madison)
*St. Elizabeth Hospital (B-220)
GREAT LAKES (Lake)
†U. S. Naval Hospital (J-609)
GREENVILLE (Bond)
*Edward A. Utlaut Memorial Hosp. (B-43)
HARRISBURG (Saline)
Harrisburg Hospital, Inc. (C-31)
*Harrisburg Medical Foundation (B-27)
HARVARD (McHenry)
*Harvard Community Memorial Hospital (F-40)
HARVEY (Cook)
*Ingalls Memorial Hospital (B-241)
HAVANA (Mason)
*Mason District Hospital (F-48)
HAZEL CREST (Cook)
*Hazel Crest General Hospital (B-58)
HERRIN (Williamson)
*Herrin Hospital (B-92)
HIGHLAND (Madison)
*St. Joseph's Hospital (B-146)
HIGHLAND PARK (Lake)
*The Highland Park Hospital Foundation (B-184)
HILLSBORO (Montgomery)
Hillsboro Hospital (B-68)
HINES (Cook)
†Veterans Administration Hospital (J-2,071)
HINSDALE (DuPage)
†*Hinsdale Sanitarium and Hospital (B-240)
HOOPESTON (Vermilion)
*Hoopeston Community Memorial Hospital (B-44)
HOPEDALE (Tazewell)
Hopedale Hospital (B-20)
JACKSONVILLE (Morgan)
*Our Savior's Hospital (B-120)
*Passavant Memorial Area Hospital (B-150)
JERSEYVILLE (Jersey)
*Jersey Community Hospital (F-54)
JOLIET (Will)
*St. Joseph Hospital (B-295)
*Silver Cross Hospital (B-260)
KANKAKEE (Kankakee)
*St. Mary's Hospital (B-254)
KEWANEE (Henry)
*Kewanee Public Hospital (B-75)
*St. Francis Hospital (B-81)
LA GRANGE (Cook)
*Community Memorial General Hospital (B-225)
LA HARPE (Hancock)
LaHarpe Hospital (B-19)

LAKE FOREST (Lake)
*Lake Forest Hospital (B-100)
LA SALLE (La Salle)
*St. Mary's Hospital (B-120)
LAWRENCEVILLE (Lawrence)
*Lawrence County Memorial Hospital (E-65)
LIBERTYVILLE (Lake)
*Condell Memorial Hospital (B-88)
LINCOLN (Logan)
*Abraham Lincoln Memorial Hospital (B-102)
LITCHFIELD (Montgomery)
*St. Francis Hospital (B-144)
MACOMB (McDonough)
*McDonough District Hospital (F-104)
Phelps Hospital (B-35)
*St. Francis Hospital (B-50)
MANTENO (Kankakee)
Hillman Memorial Hospital (C-23)
MARION (Williamson)
*Marion Memorial Hospital (D-68)
Veterans Administration Hospital (J-176)
MATTOON (Coles)
*Memorial District Hospital of Coles County (F-99)
McHENRY (McHenry)
*McHenry Hospital (B-43)
McLEANSBORO (Hamilton)
*Hamilton Memorial Hospital (F-32)
Vickers Memorial Hospital (C-14)
MELROSE PARK (Cook)
*Gottlieb Memorial Hospital (B-134)
*Westlake Hospital (B-114)
MENDOTA (La Salle)
*Mendota Community Hospital (B-58)
METROPOLIS (Massac)
*Massac Memorial Hospital (F-42)
MOLINE (Rock Island)
*Lutheran Hospital (B-210)
*Moline Public Hospital (D-240)
MONMOUTH (Warren)
*Monmouth Hospital (D-80)
MONTICELLO (Piatt)
The John and Mary E. Kirby Hospital (B-35)
MORRIS (Grundy)
*Morris Hospital (B-49)
MORRISON (Whiteside)
Morrison Community Hospital (F-32)
MOUNT CARMEL (Wabash)
*Wabash General Hospital District (F-56)
MOUNT VERNON (Jefferson)
*Good Samaritan Hospital (B-110)
Jefferson County Memorial Hospital (B-55)
MURPHYSBORO (Jackson)
*St. Joseph Memorial Hospital (B-63)
NAPERVILLE (DuPage)
*Edward Hospital (F-110)
NASHVILLE (Washington)
Washington County Hospital (F-36)
NORMAL (McLean)
*Brokaw Hospital (B-135)
NORTHLAKE (Cook)
Northlake Community Hospital (B-45)
(Formerly Bruni Hospital)
OAK LAWN (Cook)
*Christ Community Hospital (B-330)
OAK PARK (Cook)
*Oak Park Hospital (B-246)
*West Suburban Hospital (B-364)
OLNEY (Richland)
*Richland Memorial Hospital (E-112)
OREGON (Ogle)
*Warmolts Clinic (C-25)
OTTAWA (LaSalle)
*Ryburn Memorial Hospital (D-123)
PANA (Christian)
*Huber Memorial Hospital (B-70)
PARIS (Edgar)
*Paris Hospital, Inc. (C-75)
PARK RIDGE (Cook)
†*Lutheran General Hospital (B-295)
PAXTON (Ford)
*Paxton Community Hospital (B-39)
PEKIN (Tazewell)
*Pekin Memorial Hospital (B-196)
PEORIA (Peoria)
†*The Methodist Hospital of Central Illinois (B-452)
*Proctor Community Hospital (B-210)
†*St. Francis Hospital (B-598)
PERU (LaSalle)
Peoples Hospital (B-88)
PINCKNEYVILLE (Perry)
*Pinckneyville Community Hospital District (F-28)
PITTSFIELD (Pike)
*Illini Community Hospital (B-80)
PONTIAC (Livingston)
*St. James Hospital (B-86)
PRINCETON (Bureau)
*Perry Memorial Hospital (D-110)
QUINCY (Adams)
*Blessing Hospital (B-236)
*St. Mary's Hospital (B-200)
RANTOUL (Champaign)
U. S. Air Force Hospital (J-200)
RED BUD (Randolph)
*St. Clement's Hospital (B-74)
ROBINSON (Crawford)
Crawford Memorial Hospital (F-64)
ROCHELLE (Ogle)
*Rochelle Hospital (D-38)
ROCKFORD (Winnebago)
*Rockford Memorial Hospital (B-258)
*St. Anthony Hospital (B-180)
*Swedish-American Hospital (B-185)
ROCK ISLAND (Rock Island)
†*St. Anthony's Hospital (B-240)
ROSICLARE (Hardin)
*Hardin County General Hospital (B-27)
RUSHVILLE (Schuyler)
*Sarah D. Culbertson Memorial Hospital (F-50)
ST. CHARLES (Kane)
*Delnor Hospital (B-61)

SALEM (Marion)
*Salem Memorial Hospital (B-42)
SANDWICH (DeKalb)
*Sandwich Community Hospital (B-41)
SAVANNA (Carroll)
Savanna City Hospital (D-36)
SHELBYVILLE (Shelby)
*Shelby County Memorial Hospital (B-51)
SPARTA (Randolph)
*Sparta Community Hospital (F-34)
SPRINGFIELD (Sangamon)
†*Memorial Hospital (B-368)
†*St. John's Hospital (B-688)
SPRING VALLEY (Bureau)
*St. Margaret's Hospital (B-142)
STAUNTON (Macoupin)
*Community Memorial Hospital (B-50)
STERLING (Whiteside)
*Community General Hospital (D-135)
The Home Hospital (B-31)
STREATOR (LaSalle)
St. Mary's Hospital (B-112)
SYCAMORE (DeKalb)
*Sycamore Municipal Hospital (D-70)
TAYLORVILLE (Christian)
*St. Vincent Memorial Hospital (B-152)
TUSCOLA (Douglas)
Douglas County Jarman Memorial Hospital (E-39)
URBANA (Champaign)
*Carle Memorial Hospital (B-165)
*McKinley Memorial Hospital (I-61)
*Mercy Hospital (B-112)
VANDALIA (Fayette)
Fayette County Hospital (F-103)
WATSEKA (Iroquois)
*Iroquois Hospital (B-74)
WAUKEGAN (Lake)
*Lake County General Hospital (E-65)
*St. Therese Hospital (B-280)
*Victory Memorial Hospital (B-333)
WEST FRANKFORT (Franklin)
*UMWA Union Hospital (B-38)
WHITE HALL (Greene)
White Hall Hospital, Inc. (B-20)
WOOD RIVER (Madison)
*Wood River Township Hospital (H-74)
WOODSTOCK (McHenry)
*Memorial Hospital for McHenry County (B-100)
ZION (Lake)
*Zion-Benton Hospital (C-76)
(Formerly Zion Community Hospital)

MENTAL HOSPITALS

ALTON (Madison)
Alton State Hospital (1,371)
ANNA (Union)
Anna State Hospital (1,730)
CHICAGO (Cook)
Chicago State Hospital (3,031)
Illinois State Psychiatric Institute (434)
DANVILLE (Vermilion)
Veterans Administration Hospital (J-1,729)
DOWNEY (Lake)
Veterans Administration Hospital (J-2,487)
EAST MOLINE (Rock Island)
East Moline State Hospital (1,585)
ELGIN (Kane)
Elgin State Hospital (4,035)
GALESBURG (Knox)
*Galesburg State Research Hospital (1,813)
JACKSONVILLE (Morgan)
Jacksonville State Hospital (2,346)
KANKAKEE (Kankakee)
Kankakee State Hospital (2,804)
MANTENO (Kankakee)
Manteno State Hospital (5,522)
MENARD (Randolph)
Illinois Security Hospital (365)
PEORIA (Peoria)
*Peoria State Hospital (1,794)
TINLEY PARK (Cook)
Tinley Park State Hospital (480)

PRIVATE MENTAL SANITARIA

ASHMORE (Coles)
Ashmore Estates (C-25)
AURORA (Kane)
*Mercyville Sanitarium (B-216)
BATAVIA (Kane)
Bellevue Place (C-80)
CHICAGO (Cook)
*Fairview Sanitarium (C-53)
*Pinel Hospital (B-65)
Ridgeway House (C-75)
DES PLAINES (Cook)
*Forest Hospital (C-90)
ELGIN (Kane)
Resthaven Sanitarium (C-100)
FOREST PARK (Cook)
Riveredge (C-269)
JACKSONVILLE (Morgan)
The Norbury Hospital (C-50)
ROCKFORD (Winnebago)
Elmlawn Sanitarium (C-43)
WINNETKA (Cook)
*North Shore Hospital (C-100)

STATE SCHOOLS FOR MENTALLY DEFECTIVE

CHICAGO (Cook)
*Illinois State Pediatric Institute (585)
DIXON (Lee)
Dixon State School (3,235)
LINCOLN (Logan)
Lincoln State School (3,801)

HOSPITALS WITH SPECIAL TYPE OF SERVICE

		Type of Service
AURORA (Kane)	Kane County Springbrook Sanitarium (E-65)	TB
CAIRO (Alexander)	Alexander County Tuberculosis Hospital (E-47)	TB
CASEYVILLE (St. Clair)	Pleasant View Sanatorium (E-100)	TB
CHICAGO (Cook)	*Booth Memorial Hospital (B-25)	Maternity
	*Chicago Eye, Ear, Nose and Throat Hospital (C-37)	EENT
	*Chicago State Tuberculosis Sanitarium (I-400)	TB
	*The Children's Memorial Hospital (B-218)	Pediatric
	Halco Sanitarium, Inc. (C-10)	Alcoholic
	Illinois Children's Hospital—School (I-92)	Rehabilitation, Pediatric
	*Illinois Eye and Ear Infirmary (I-122)	EENT
	*LaRabida Jackson Park Sanitarium (B-93)	Pediatric, Chronic
	*Martha Washington Hospital (B-50)	Alcoholic
	*Municipal Contagious Disease (D-125)	Contagious Disease
	*Municipal Tuberculosis Sanitarium (D-1,428)	TB
	*Rehabilitation Institute of Chicago (B-65)	Rehabilitation
	*Charles H. and Rachel M. Schwab Rehabilitation Hospital (B-61)	Rehabilitation
	St. Vincent's Infant Hospital (B-50)	Pediatric
	*Shriners Hospital for Crippled Children (B-68)	Orthopedic, Pediatric
DANVILLE (Vermilion)	Vermilion County Tuberculosis Dispensary and Hospital (E-34)	TB
DECATUR (Macon)	*Macon County Tuberculosis Sanatorium (E-75)	TB
DWIGHT (Livingston)	The Keeley Institute (C-20)	Alcoholic
EDWARDSVILLE (Madison)	Madison County Sanatorium (E-90)	TB
HINSDALE (Cook)	*The Suburban Cook County Tuberculosis Sanitarium District (G-209)	TB
JACKSONVILLE (Morgan)	Oaklawn, Morgan County Tuberculosis Sanatorium (E-40)	TB
JOLIET (Will)	Sunny Hill Sanatorium (E-60)	TB
MACKINAW (Tazewell)	Oak Knoll Sanatorium (E-40)	TB
MOOSEHEART (Kane)	Mooseheart Hospital (B-43)	Pediatric
MOUNT VERNON (Jefferson)	*Mount Vernon State Tuberculosis Sanitarium (I-125)	TB

		Type of Service
NORMAL (McLean)	Fairview, McLean County Tuberculosis Sanatorium (E-34)	TB
OAK FOREST (Cook)	Oak Forest Hospital (E-2,287)	Chronic, Rehabilitation
OTTAWA (LaSalle)	Highland Sanatorium and Convalescent Home of LaSalle County (E-82)	TB, Nursing Home
	Ottawa General Hospital (C-44)	Chronic
PEORIA (Peoria)	Florence Crittenton Peoria Home (B-7)	Maternity
	*Peoria Municipal Tuberculosis Sanitarium (D-94)	TB
PONTIAC (Livingston)	Livingston County Sanatorium (E-50)	TB
QUINCY (Adams)	Hillcrest, Adams County Tuberculosis Sanatorium (E-38)	TB
ROCKFORD (Winnebago)	Rockford Municipal Tuberculosis Sanitarium (D-92)	TB, Nursing Home
ROCK ISLAND (Rock Island)	*Rock Island County Tuberculosis Sanatorium (E-71)	TB
SPRINGFIELD (Sangamon)	*St. John's Sanatorium (B-125)	TB
URBANA (Champaign)	The Outlook Tuberculosis Sanatorium (E-36)	TB
WAUKEGAN (Lake)	*Lake County Tuberculosis Sanatorium (E-90)	TB
WEDRON (LaSalle)	St. Joseph's Health Resort and Sanitarium (B-94)	Medical-Chronic

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*The hospitals marked with an asterisk (*) are those which are accredited by the Joint Commission on Accreditation of Hospitals as of Dec. 31, 1963.

The presence of a hospital on this list means it has complied in the main with the standards of the Joint Commission on Accreditation of Hospitals as compiled over the years by the medical and hospital professions. The standards are minimal and it is hoped hospitals will make every effort to exceed them.

Hospitals with less than 25 beds are not eligible for accreditation. Inquiries about this listing or hospital accreditation should be directed to the office of the Joint Commission on Accreditation of Hospitals at 200 E. Ohio St., Chicago.

†Dagger indicates general hospitals having psychiatric units licensed by the Illinois Department of Mental Health. All other mental facilities are licensed and/or operated by this department (federal hospitals excluded).

Number in parenthesis indicates number of beds in hospital. Initial preceding number refers to the type of control, as follows:

A — Corporation
B — Non-profit association or corporation
C — Privately owned and operated
D — City
E — County
F — Hospital District
G — Sanitarium District
H — Township
I — State
J — Federal

DIRECTORY OF LICENSED HOMES

The following list of homes licensed by the Illinois Department of Public Health (as of 1962) is divided into three sections: nursing homes, sheltered care homes, and homes for the aged. Ownership of these homes may be individual, partnership, corporation for profit, non-profit corporation, government, or trust-endowment.

NURSING HOMES

A nursing home is equipped and staffed to provide personal and nursing care to all residents. Accreditation of nursing homes is a new program that has been undertaken by the National Council on Accreditation of Nursing Homes on the national level. The national council was established by the American Medical Association and the American Nursing Home Association. Dr. H. Close Hesseltine of the Illinois State Medical Society is chairman.

Since the program is new, many nursing homes in Illinois have had no chance to apply for accreditation. It is hoped that many nursing homes will be accredited by the end of the first year of the program's operation.

Under the current standards, accreditation is granted at three levels:

1. Intensive Nursing Care Facility—Nursing service shall be under the supervision of a registered professional nurse and a registered professional nurse shall be on duty at all times.
2. Skilled Nursing Care Facility — Nursing service shall be under the supervision of a registered nurse. A registered professional nurse shall be in charge of patient care for a minimum of five days, 40 hours per week. In addition, at least one licensed nurse shall be on duty at all times.
3. Intermediate Care Facility—Nursing service shall be under the supervision of a licensed nurse who will be on duty five days per week, with a minimum of 8 hours each day. In addition, there shall be a night attendant awake and fully dressed.

Accredited facilities are indicated by a numeral designating their level of accreditation.

ALBION (Edwards County)
Rest Haven Nursing Home
130 W. Main St.
ALEDO (Mercer County)
DeSmith Nursing Home
607 W. Seventh St.
Mercer County Nursing Home
Rte. 4
Twilight Haven
303 E. Seventh St.
ALHAMBRA (Madison County)
Haven of Rest
ALTON (Madison County)
College Avenue Nursing Home
920 College Ave.
Elm View Home
205 E. Elm St.
Main Street Nursing Home
1216 Main St.
Mather's Nursing Home
2349 Virden St.
Riverview Nursing Home
440 Jefferson St.
Ruth's Nursing Home
510 E. Fourth St.
Villa Terrace Convalescent Home
510 Seminary Sq.
Villa Terrace Annex 2
520 Seminary Sq.
AMBOY (Lee County)
Forman Nursing Home
339 N. Mason Ave.
APPLE RIVER (Jo Daviess County)
Hick's Nursing Home
Walnut St.
ARCOLA (Douglas County)
Arcola Nursing Home
112 S. Locust St.
Fishel Nursing Home
129 N. Pine St.
ARLINGTON HEIGHTS (Cook County)
Arlington Heights Rest Home
414 N. Vail St.
Thorsen's Nursing Home
R.R. 2, 2105 N. Chestnut Rd.
AROMA PARK (Kankakee County)
Campbell Nursing Home
Fourth St.
ARROWSMITH (McLean County)
DeArms Nursing Home
W. Crosson St.
ATLANTA (Logan County)
Atlanta Nursing Home
Chatham St.
Bartmann Nursing Home
R.R. 1
AUGUSTA (Hancock County)
M. Ranck Nursing Home
E. Main St.
AURORA (Kane County)
Colonial Nursing Home
422 N. Lake
Galena Boulevard Nursing Home
1017 Galena Blvd.
BARRINGTON (Cook County)
Barrington Rest Home, Inc.
145 W. Main St.
BARRY (Pike County)
Barry Nursing Home
780 Grand St.
Churchill Nursing Home
1038 Pratt St.
BARTONVILLE (Peoria County)
Martin's Convalescent Home
10 McClure Ct.
BATAVIA (Kane County)
Kane County Home
Averill Rd.

BEARDSTOWN (Cass County)
Boyd Nursing Home, Inc.
209-215 W. Third St.
Brierly House Nursing Home
604 State St.
Parkview Nursing Home
903 E. Third St.

BEAVERVILLE (Iroquois County)
Haven of Rest Nursing Home

BELLEVILLE (St. Clair County)
Atkinson Nursing Home
514 S. Jackson St.
Herald Nursing Home
506 Court St.
Hillcrest Nursing Home
420 Mascoutah Ave.
Mary Lorton Nursing Home
425 S. 20th St.
Rest Haven Old Folks Home
44th and N. Belt West

BELLWOOD (Cook County)
Elizabeth Von Gehr Nursing Home
209 S. 22nd Ave.

BELVIDERE (Boone County)
Maple Crest Nursing Home
Boone County Home
R.R. 1, Rt. 76
Sutton's Nursing Home
226 N. State St.

BEMENT (Piatt County)
Bement Rest Haven
101 S. Sangamon St.

BENTON (Franklin County)
Linwood Nursing Home, Inc.
N. Main and Mitchell Sts.
Rest Haven Nursing Home
418 W. Webster

BERWYN (Cook County)
R. N. Convalescent Home
6918 Windsor Ave.

BLANDINSVILLE (McDonough County)
Newland Nursing Home

BLOOMINGDALE (Du Page County)
Heritage Manor (2)
704 E. Walnut St.
Mark Lund Hilltop, Inc.
158 Prairie St.

BLOOMINGTON (McLean County)
Maple Grove Nursing Home
S. Main Street Rd., U.S. Hwy. 51
Nel-Dor Arms Nursing Home
116 E. Lafayette St.
Twin City Nursing Home
22 White Pl.

BLUE ISLAND (Cook County)
Bel-Air Nursing Home
2418 W. 127th St.
Burr Oaks Nursing and Convalescent Center
2426 Burr Oaks Ave.
Radtke's Nursing Home
2427 W. 127th St.
Stocker's Nursing Home
2346 Union St.

BLUE MOUND (Macon County)
Park View Nursing Home
Dunbar St.

BLUFORD (Jefferson County)
Schumm Nursing Home

BROADVIEW (Cook County)
Beverly Park Nursing Home
2421 Erika Dr.

BROOKFIELD (Cook County)
Brookfield Nursing and Convalescent Home
9128 W. 31st St.
Hill Haven Nursing Home
4548 Deyo
Kerr Nursing Home
9022 Grant Ave.

BUNKER HILL (Macoupin County)
Hammond Nursing Home
S. Franklin St., Box 278
Tower View
Morgan St.

BURNHAM (Cook County)
The Homestead
14500 Manistee Ave.

BUSHNELL (McDonough County)
The Elms
McDonough County Home
Heron Nursing Home
708 N. Dean St.

CAMP POINT (Adams County)
Camp Point Convalescent Home
Jacobs Nursing Home
Maplewood Nursing Home

CANTON (Fulton County)
Canton Nursing Home, Inc.
N. Main St.
Sherwood Nursing Home
914 S. Main St.
Sherwood Nursing Home No. 2
203 W. Locust St.

CARLINVILLE (Macoupin County)
Gotcher Home
719 Mayo St.
Henry Nursing Home
323 Sumner St.
Joiner Nursing Home
706 N. Oak St.
Lee Nursing Home
334 Orient St.
Macoupin County Nursing Home
R. R. 2
Scherba's Nursing Home
817 N. High St.
Weatherford Nursing Home
318 Buchanan St.
Woodlawn Acres Convalescent
and Nursing Home
P. O. Box 268

CARMI (White County)
White County Nursing Home
R. R. 3

Wilmar Restorium, Inc.
College Blvd.

CARROLLTON (Greene County)

Tower View Nursing Home No. 2
626 Maple Ave.

CARTHAGE (Hancock County)

Margaret Ranck Nursing Home
140 W. Main St.

CASEY (Clark County)

Rude's Goodwill Home
208 W. Main St.

CENTRALIA (Marion County)

Centralia Nursing Home
620 E. Broadway

Jackson's Nursing Home
230 N. Cherry St.

CHAMPAIGN (Champaign County)

American Manor Convalescent Home
1002 W. Church St.

Cole Nursing Home
1102 W. Church St.

Greenbrier Manor (3)
1915 S. Mattis

Laymon Convalescent Home
702 W. University Ave.

Leonard Nursing Home, Inc.
618 W. Church

CHARLESTON (Coles County)

Adkins Nursing Home
849 C. St.

Charleston Nursing Home
216 Fifth St.

Hilltop Nursing Home, Inc.
635 Division St.

Oakwood Convalescent Home
1041 Seventh St.

Rennels' Nursing Home
214 Fifth St.

Wilson-Kaley Nursing Home
1501 18th St.

CHENOA (McLean County)

Glenn R. Guest Home
324 Weir St.

CHERRY VALLEY (Winnebago County)

Cherry Valley Rest Home
Box 123

CHESTER (Randolph County)

Three Springs Lodge
R. R. 1

CHICAGO (Cook County)

A-1 Nursing Home, Inc.
4247 N. Hazel

A-1 Nursing Home, Inc.
4249 N. Hazel

Addison Manor, Inc.
3526 N. Reta Ave.

Albany Park Kosher Nursing Home, Inc.
3418 W. Ainslie

Alshore House
2840 Foster Ave.

Anderson Nursing Home, Inc.
6006 N. Kenmore Ave.

Anna Hadley Nursing Home
3209 W. Douglas Blvd.

Arthur W. Devermann Residence
5746 N. Sheridan Rd.

Balmoral Convalescent Home, Inc.
5420 N. Sheridan Rd.

Barry Nursing Home, Inc.
435 W. Barry Ave.

Beachview Convalescent Home, Inc.
6345 N. Sheridan Rd.

Beckwith Nursing Home
3240 W. Washington Blvd.

Bell Nursing Home
11079 S. Bell Ave.

Belmont Rest Home, Inc.
1936 W. Belmont

Birchwood Beach Convalescent Home No. 1
7350 N. Sheridan Rd.

Birchwood Beach Convalescent Home No. 2
7364 N. Sheridan Rd.

Brown's Convalescent Home, Inc.
1900 S. Kedzie Ave.

Burke Nursing Home
11840 S. Western Ave.

Burnside Rest Home
9435 Langley Ave.

Carmen Manor
1470 W. Carmen Ave.

Cobb and Coleman Home
4533 W. Washington Blvd.

Colonial Towers Nursing Home
6032 N. Kenmore Ave.

Cordia Harmon Nursing Home
6463 S. Kimbark Ave.

Davis Nursing Home, Inc.
725-29 Waveland Ave.

Dearborn House, Inc.
2400 S. Dearborn St.

Douglas Park Nursing Home
1518-22 S. Albany Ave.

Doyle's Nursing and Convalescent Home
9626 S. Vincennes Ave.

Edgewater Manor
5838 N. Sheridan Rd.

Elizabeth Olivia Home
3952 S. Ellis Ave.

Elsa S. Long Convalescent Home
5250-5256 N. Sheridan Rd.

Englewood Rest Have, Inc.
7253 Yale Ave.

Farwell Beach Convalescent Home, Inc.
1145 W. Farwell Ave.
Feinstein's Nursing Home, Inc.
5960 N. Sheridan Rd.
Fitch Nursing Home
11410 S. Forrestville Ave.
Fullerton Convalescent Home, Inc.
1400 W. Monroe St.
Garden View Home, Inc. (2)
6450 N. Ridge Ave.
Garfield Nursing Home
3834 W. Washington Blvd.
Georgian Manor Rest Home
5726 N. Sheridan Rd.
Golden Age Home
4542 N. Malden Ave.
Granville Manor
1021 Granville Ave.
Greenview Rest Home
7225 Greenview
Hampden Manor
2724 N. Hampden Ct.
Hanson Nursing Home
7240 S. Jeffery Blvd.
Harmon-Bragg Nursing Home
6455 S. Kimbark Ave.
Hastings Nursing Home
7241 S. Princeton Ave.
Hearthside Nursing Home, Inc.
1223 W. 87th St.
Hollywood Convalescent Home, Inc.
1054 W. Hollywood Ave.
Homan Manor, Inc.
323 S. Homan Ave.
Howard Convalescent Home, Inc.
6522 S. Harvard Ave.
Ivory Nursing Home
5839 S. Calumet Ave.
Johnson Nursing Home, Inc.
3321 W. Fulton St.
Kedzie Manor No. 1
3234 W. Washington
Kedzie Manor No. 2
3230 W. Washington
Kenmore House (2)
5517 N. Kenmore Ave.
Ken-Rose Rest Home
6255 N. Kenmore Ave.
Kimbark Nursing Home
6132 S. Kimbark Ave.
Kostner Manor
1617 N. Kostner Ave.
Lake Shore Nursing Home, Inc.
7230 N. Sheridan Rd.
Lakeside Nursing Home
6330 N. Sheridan Rd.
Lake View Manor Rest Home
2824 N. Sheridan Rd.
Lehrer Nursing Home, Inc.
4636 N. Beacon St.
Lincoln Park Home
2042 N. Orleans St.
Linderman Nursing Home, Inc.
3311 W. Monroe St.
Malden Nursing Home, Inc.
4616 N. Malden St.
Maple Nursing Home
4743 W. Washington St.
Mark Howard Home
4938 Drexel Blvd.
Marquette Manor No. 1
6658 S. Harvard Ave.
Marquette Manor No. 2
6629 S. Harvard Ave.
Martha Washington Manor, Inc.
4515 S. Drexel Blvd.
Marx Nursing Home
6166 N. Sheridan Rd.
Melbourne Convalescent Home
4625 N. Racine Ave.
Midwest Home
310 S. Hamlin Ave.
Miller Nursing Home
3256 W. Douglas Blvd.
Misericordia Home
2916 W. 47th St.
Monterey Convalescent Home
4616 S. Drexel Blvd.
Monterey Convalescent Home
1919 S. Prairie Ave.
Montgomery Convalescent Home
2735 S. Prairie Ave.
Mortkowicz Kosher Nursing Home
4851 N. Rockwell Ave.
Mt. Pisgah Nursing Home
4220-28 S. Champlain Ave.
Nesbitt Home
943 W. Foster Ave.
North Shore Rest Haven, Inc.
7428 N. Rogers Ave.
Ogden Park Convalescent Home
6617-25 S. Racine Ave.
Panenka Nursing Home
1901 S. Lawndale Ave.
Park House
2320 S. Lawndale Ave.
Patterson Convalescent Home
3242 W. Maypole Ave.
Peyton Convalescent Home
4541 S. Michigan Ave.
Rabbi Meisels Convalescent Home, Inc.
4900 N. Bernard Ave.
Rhodes Nursing Home
3221 W. Washington Blvd.
Royal Manor
5640 N. Sheridan Rd.
St. Michael's Rest Haven, Inc.
4815 S. Drexel Blvd.

Schiller Rest Home, Inc.
1428 W. Jarvis
Sheridan Pavilion
6130 N. Sheridan Rd.
Shorecrest Convalescent Home, Inc.
7331 N. Sheridan Rd.
Shore View Manor Convalescent Home, Inc.
2719 E. 75th St.
South Shore Kosher Rest Home, Inc.
7325 S. Exchange Ave.
Sovereign Kosher Homestead
6224 N. Kenmore Ave.
Sovereign Kosher Rest Home
6159 N. Kenmore Ave.
Stern's Convalescent Home, Inc.
730 Waveland St.
Stewart Nursing Home, Inc.
6710 S. Stewart Ave.
Sunnyside Nursing Home
4537 N. Greenview Ave.
Sunset Nursing Home, Inc.
7270 South Shore Dr.
Thorndale Manor
1020 W. Thorndale Ave.
Uptown Convalescent Home
4646 N. Beacon St.
Victory Convalescent Home, Inc.
828 W. 35th Pl.
Vincennes Manor, Inc.
4724 S. Vincennes Ave.
Waveland Manor, Inc.
3662 N. Lake Shore Dr.
Wellington Plaza Nursing
and Therapy Center
504 W. Wellington
Wendt Nursing Home
5914 N. Sheridan Rd.
Westwood Manor, Inc.
2444 W. Touhy Ave.
Wincrest Nursing Home, Inc.
6326 N. Winthrop Ave.
Winston Manor Convalescent
and Nursing Home, Inc.
2155 W. Pierce Ave.
Wrightwood Home, Inc. (Front)
504 W. Wrightwood Ave.
Wrightwood Home, Inc. (Rear)
504 W. Wrightwood Ave.

CHICAGO HEIGHTS (Cook County)
Bel-Air Nursing Home No. 1
285 W. 16th St.
Bel-Air Nursing Home No. 2
309 W. 16th St.

CHRISMAN (Edgar County)
Watson Nursing Home
109 E. Monroe

CLAYTON (Adams County)
Padgett Nursing Home
Box 166

CLINTON (DeWitt County)
DeWitt County Nursing Home
R. R. 1
Pine Crest Nursing Home
North Center Limits

COAL VALLEY (Rock Island County)
Oak Glen Nursing Home

COLCHESTER (McDonough County)
Helton Nursing Home
S. East St.

CORDOVA (Rock Island County)
Baumgartner Convalescent Home
R. R. 1, Box 53

COLLINSVILLE (Madison County)
McQueen Nursing Home
509 E. Clay St.

CREAL SPRINGS (Williamson County)
Creal Springs Nursing Home
S. Line St.

CRESTWOOD (Cook County)
Fraley Convalescent Home
4330 Midlothian Turnpike Rd.

CRETE (Will County)
Skylane Acres
Rte. 1, Box 359-20

DANVILLE (Vermilion)
Colonial Manor, Inc.
629 Warrington Ave.
Margenette
503 W. North St.
Nance Nursing Home
622 Bryan Ave.
Vermilion County Nursing Home
R. R. 1, Box 13

DECATUR (Macon County)
Lakeshore Manor, Inc.
1293 S. 34th St.
Mabel's Nursing Home
936 N. Church St.
Macon Acres, Macon County Home
R. R. 1, Box 192
Mary Ann's
640 W. Main St.
Minor's Convalescent Home
341 N. Edward St.
Muirheid Nursing Home
231 E. Condit St.
North Pine Nursing Home
820 W. North St.
Wakefield Aged Retreat Home
1504 N. Water St.
Wakefield Rest Home
800 W. McKinley Ave.
West View Nursing Home
628 W. Main St.

DE KALB (DeKalb County)
DeKalb County Nursing Home
Sycamore Rd., R. R. 23

DES PLAINES (Cook County)
Brookwood Convalescent
and Nursing Center (1)
Lyman and Dempster Sts.
Des Plaines Convalescent Home (3)
866 Lee St.

Graceland Home of Des Plaines, Inc.(2)
545 Graceland Ave.
Oak View
9555 Golf Rd.

DIXMOOR (Cook County)
Dixmoor Villa Convalescent Home, Inc.
Norris and Davis Sts.
Starnes Nursing Home
14434 S. Hoyne Ave.

DIXON (Lee County)
Lee County Nursing Home
R. R. 4
Mansion Nursing Home, Inc. (2)
403 E. Fellows St.
Rest Haven Convalescent Home
204 E. Third St.

DOLTON (Cook County)
Dolton Manor Convalescent Home
14051 S. Lincoln Ave.
Miller's Rest Home
158th and Cottage Grove Ave.

DOWNERS GROVE (DuPage County)
Highland House
35th St. and Highland Ave.

DUNDEE (Kane County)
Bowes Nursing Home
305 Oregon St.
Gregg Nursing Home
417 E. Hill St.

EAST ST. LOUIS (St. Clair County)
Carr Nursing Home
3110 Bond Ave.
Doctors' Convalescent Center
421 E. Broadway
Fletcher Ann Convalescent Home
2640 St. Louis Ave.
Lively Nursing Home
1303 Baugh Ave.

EDWARDSVILLE (Madison County)
Madison County Nursing Home
Main St.

EFFINGHAM (Effingham County)
Marks Nursing Home
406 E. Jefferson

ELDORADO (Saline County)
Eldorado Nursing Home, Inc.
Third and Locust Sts.
Good Shepherd Nursing Home No. 1
First and Jasper Sts.

ELGIN (Cook County)
Park View Nursing Home
731 Linden Ave.

ELGIN (Kane County)
Daybreak Nursing Home
420 Douglas Ave.
Elgin-Bowes Nursing Home
105 N. Gifford St.
Elgin Rest Home
304 South St.
Hillcrest Convalescent Home, Inc.
4 N. Jackson St.
Isabelle Rest Home
104 S. State St.
Little Angels Nursing Home
330 Watres Pl.
Mary's Hill Rest Home
309 Watch St.
Mary Margaret Manor
134 N. McLean Blvd.
Oliver Nursing Home, Inc.
325 Watch St.
Raloff Nursing Home
316 Division St.
Restville House
443 E. Chicago St.
Woodlawn Nursing Home
705 W. Highland Ave.

ELMHURST (DuPage County)
Elmhurst Nursing Home
200 E. Lake St.
Sunnybrook Nursing Home
16 W. 541 Butterfield Rd.

ELMWOOD (Peoria County)
Elm Haven, Inc.

EL PASO (Woodford County)
Heffner Nursing Home, Inc.
404 E. First St.
Lewis Nursing Home, Inc.
487 Elmwood Ct.
Tobein Nursing Home, Inc.
469 Elmwood Ct.

EVANSTON (Cook County)
Asbury Home for Convalescents
1554 Asbury Ave.
Broad Nursing Home
2001 Orrington Ave.
Broad Nursing Home
1840 Asbury Ave.
Evanston Convalescent Center, Inc.
1300 Oak Ave.
Evanston Rest Home, Inc.
1729 Livingston St.
Klingler Nursing Home
2306 Ridge Ave.
Pembridge House, Inc.
1406 Chicago Ave.
Ridge Crest Home
1708 Ridge Ave.
Three Oaks Nursing Center (1)
500 Asbury Ave.

EVERGREEN PARK (Cook County)
Bel Air Nursing Home
9307 S. Crawford Ave.
Evergreen Gardens Convalescent Home
9101 Crawford Ave.
Evergreen Manor Nursing Home
3327 W. 95th St.
Peace Memorial Home
10124 S. Kedzie Ave.
Radtke's Nursing Home
2701 W. 95th St.

FAIRBURY (Livingston County)
Mae F. Harris Home
410 E. Oak St.
FAIRFIELD (Wayne County)
Fair Haven
507 W. Elm St.
FARMER CITY (DeWitt County)
Farmer City Nursing Home, Inc.
326 Clinton Ave.
FARMINGTON (Fulton County)
Harmony Haven Nursing Home
365 E. Fort St.
FLORA (Clay County)
Cottengaim's Nursing Home
221 E. Third St.
Raber Nursing Home
402 E. Fourth St.
FREEBURG (St. Clair County)
Marian Nursing Home
406 State St.
FREEPORT (Stephenson County)
Benjamin Stephenson Nursing Home
Walnut Rd.
GALATIA (Saline County)
Good Shepherd Nursing Home No. 2
Main and Cross Sts.
GALENA (Jo Daviess County)
Sunny Hill Nursing Home
513 Bouthillier St.
GALESBURG (Knox County)
Glendening Nursing Home
490 N. Cherry St.
Harvey Nursing Home
774 N. Broad St.
Powell Nursing Home
620 S. Academy
Sheltering Arms Nursing Home
618 Michigan Ave.
Wiegand Nursing Home
731 N. Seminary
GALVA (Henry County)
Wasson Nursing Home
309 N. E. First St.
GENESEO (Henry County)
Gradert's Nursing Home
426 W. First St.
Henry County Convalescent Home
R. R. 4
GENEVA (Kane County)
Anna Baum Home
115 Campbell St.
Marian Manor Nursing Home
28 N. First St.
GENOA (DeKalb County)
Villa Nursing Home
121 Main St.
GIBSON CITY (Ford County)
Gibson City Convalescent Home, Inc.
415 S. Lott St.
Williams Nursing Home
315 N. Guthrie St.
GILLESPIE (Macoupin County)
Tower View Nursing Home No. 3
703 S. Second St.
GLEN ELLYN (DuPage County)
Manor Convalescent Home, Inc.
818 DuPage Rd.
GLENVIEW (Cook County)
Glenview Convalescent Home
10320 Milwaukee Ave.
Whitehaven Acres, Inc.
Greenwood Ave. and Melody Lane
GRAYVILLE (White County)
Baldwin Nursing Home, Inc.
305 W. North St.
GREENFIELD (Greene County)
Cedar Knoll Nursing and
Convalescent Home
711 Bluff St.
GREENVILLE (Bond County)
Bourgeois Nursing Home, Inc.
100 W. College St.
Pacatte Nursing Home
102 E. College St.
GRIDLEY (McLean County)
Dowell Nursing Home
202 W. Sixth St.
HALF DAY (Lake County)
Half Day Convalescent and
Nursing Home
N. Milwaukee Ave.
HAMPSHIRE (Kane County)
Hampshire Nursing Home
Jackson and Warner Sts.
Lydia Nursing Home
25 W. Jackson St.
HARDIN (Calhoun County)
Montreat Nursing Home
R. R. 2, Box 152
HARRISBURG (Saline County)
Bacon's Nursing Home
Box 269, N. Granger St.
HARTLAND (McHenry County)
Valley Hi Nursing Home
McHenry County Home
HARVARD (McHenry County)
Harvard Rest Home
210 E. Front St.
HARVEY (Cook County)
St. Jude's Nursing Home
14660 S. Western Ave.
HAVANA (Mason County)
Havana Nursing Home
224 W. Mound St.
Reid Nursing Home, Inc.
121 S. Orange St.
Watkins Nursing Home
317 S. Water St.
HERRIN (Williamson County)
Hampton Nursing Home
321 S. 14th St.
Ridley's Rest Haven
Nursing Home, Inc.
920 S. 14th St.

HICKORY HILLS (Cook County)
Villa Marie Nursing Home, Inc.
9246 S. Roberts Rd.
HIGHLAND (Madison County)
Miles Nursing Home
817 Ninth St.
HIGHLAND PARK (Lake County)
Abbott House
405 Central Ave.
HIGHWOOD (Lake County)
Pavilion of Highland Park (3)
50 Pleasant Ave.
HILLSBORO (Montgomery County)
Hillsboro Nursing Home
624 S. Main St.
HINSDALE (DuPage County)
Griffith Nursing Home
Garfield St. and Plainfield Rd.
Oaks Nursing Home
Rte. 83 and 91st St.
Shank Rest Home
525 W. Ogden Ave.
HOPEDALE (Tazewell County)
Hopedale Nursing Home (1)
Second St.
INA (Jefferson County)
Underwood Nursing Home
3 Elm St.
IRVING (Montgomery County)
Rest Haven Nursing Home, Inc.
JACKSONVILLE (Morgan County)
Lasley Nursing Home
844 W. College Ave.
Meline Nursing Home No. 1
606 N. Church St.
Meline Nursing Home No. 2
616 N. Church St.
Meline Nursing Home No. 3
612 N. Church St.
Modern Care Convalescent
and Nursing Home
1500 W. Walnut
Smith Nursing Home
221 E. Beecher St.
JERSEYVILLE (Jersey County)
Garnet Nursing Home
602 W. Pearl St.
Green Lawn Nursing Home
518 S. State St.
Waters Nursing Home
408 N. Giddings St.
JOLIET (Will County)
Broadway Nursing Home
216 N. Broadway
Johnson Nursing Home
450 Herkimer St.
LeSan Nursing Home
601 Campbell St.
Lincoln Nursing Home
611 E. Cass St.
Pleasant Center Nursing Home
5 S. Center St.
Rest Haven Nursing Home
519 Campbell St.
JONESBORO (Union County)
Dodd Nursing Home
Jonesboro Sq.
KANKAKEE (Kankakee County)
Bethel Nursing Home
210 N. Harrison Ave.
Casper Nursing Home No. 2
480 E. Oak St.
Deerwood Convalescent Home
R. R. 5, Aroma Park Rd.
Eventide Homes, Inc.,
Hallmark House
1151 E. Court St.
KEWANEE (Henry County)
Park View Home
210 N. Vine St.
Sunnyslope
R. R. 1, Cambridge Rd.
KNOXVILLE (Knox County)
Good Samaritan Nursing Home
407 N. Hebard St.
Knox County Nursing Home
St. Martha's Nursing Home, Inc.
N. Market St.
LA GRANGE (Cook County)
LaGrange Convalescent and
Nursing Center
42 S. Ashland Ave.
LAKE BLUFF (Lake County)
Hill Top Farm
502 N. Telegraph Rd.
LAKE VILLA (Lake County)
Hampstead House
Rte. 1, Box 45
Lake Villa Nursing Home
P. O. Box 87, Cedar Ave.
Venetian Manor Convalescent Home
Rte. No. 2 on Rte. No. 132,
Grand Ave.
LAKE ZURICH (Lake County)
Bee Dozier's Maple Hill
Nursing Home, Inc.
P. O. Box 288
LANSING (Cook County)
Tri-State Manor Nursing Home
2500-175th St.
LAWRENCEVILLE (Lawrence County)
Knight Nursing Home
1509 Twelfth St.
Shidler Nursing Home
1022 Twelfth St.
LEBANON (St. Clair County)
Bohannon Nursing Home, Inc.
404 S. Fritz St.
LENA (Stephenson County)
Ortiz Convalescent Home
Schuyler and Camp Sts.
LE ROY (McLean County)
LeRoy Nursing Home, Inc.
902 N. Mill St.

LEWISTOWN (Fulton County)
Stephens Nursing Home
305 S. Main St.
LIBERTYVILLE (Lake County)
Lake County Nursing Home
1125 N. Milwaukee Ave.
Wayside Home
214 W. Park Ave.
LINCOLN (Logan County)
Deaconess Memorial Home
302-330 Seventh St.
Mary-Henry Convalescent Home
313 Willard Ave.
Wasson Nursing Home, Inc.
1011 Third St.
LITCHFIELD (Montgomery County)
Friendly Haven Nursing Home
823 Kirk St.
LOCKPORT (Will County)
Oak Bluff Nursing Home
102 Bruce Rd.
LONDON MILLS (Fulton County)
London Nursing Home
LOUISVILLE (Clay County)
Hill Crest Nursing Home
Chestnut St.
MADISON (Madison County)
Madison Nursing Home
1521 Second St.
MARENGO (McHenry County)
Florence Rest Home
546 E. Grant Hwy.
MAROA (Macon County)
Villa Maria
125 S. Main St.
MARTINSVILLE (Clark County)
Glendening Nursing Home
W. Washington St.
MASCOUTAH (St. Clair County)
Mascoutah Nursing Home No. 1
213 E. Church St.
Winker Nursing Home
1244 W. Main St.
MASON CITY (Mason County)
Christian Care Nursing Home
705 E. Chestnut St.
MATTOON (Coles County)
Cunningham Nursing Home
1312 Wabash Ave.
MAYWOOD (Cook County)
Lendino Nursing Home, Inc.
1110 S. Ninth Ave.
McHENRY (McHenry County)
Villa Nursing Home
1201 W. Rocky Beach
McLEANSBORO (Hamilton County)
McLeansboro Nursing Home
205 E. Cherry St.
MIDLOTHIAN (Cook County)
Bowman Nursing Home, Inc.
14743 S. Turner Ave.
Bowman Nursing Home, Inc., No. 1
3249 W. 147th St.
Clover Acres
5252 W. 147th St.
Largent Convalescent Home
4323 W. 147th St.
Maple Farm Convalescent Home
14500 S. Long St.
MILAN (Rock Island County)
Comfort Harbor Convalescent
and Nursing Home
116 W. Second Ave.
MILLEDGEVILLE (Carroll County)
Milledgeville Nursing Home
600 Main St.
MINONK (Woodford County)
Kirkton Nursing Home
221 Locust St.
MOLINE (Rock Island County)
Fairhaven Nursing Home
2525 Ninth Ave.
MONMOUTH (Warren County)
Colonial Nursing Home, Inc.
303 E. Broadway
Monmouth Nursing Home
116 S. H St.
Warren County Nursing Home
R. R. 4
MONTICELLO (Piatt County)
Cozy Haven Nursing Home
713 W. Bond St.
Piatt County Nursing Home
R. R. 2
MORRIS (Grundy County)
Dena Erickson's Nursing Home
916 Fremont Ave.
Grundy County Nursing Home
R. R. 4
MORRISON (Whiteside County)
Eveningside Nursing Home
509 N. Genesee St.
MORRISONVILLE (Christian County)
Memorial Nursing Home
MORTON (Tazewell County)
Morton Nursing Home
424 N. Main St.
Restmor, Inc.
925 E. Jefferson
MT. CARMEL (Wabash County)
Shurtleff Annex
416 Plum St.
Shurtleff Cottage
429 E. Fifth St.
Shurtleff Lodge
318 W. 2nd St.
Shurtleff Nursing Home No. 4
218 Chestnut St.
Wabash Nursing Home
Rte. 3
MT. CARROLL (Carroll County)
Mt. Carroll Nursing Home
MT. OLIVE (Macoupin County)
Albert Nursing Home
101 W. Fourth North
MT. STERLING (Brown County)
Barker's Nursing Home
204-206 Railroad Ave.
Haley's Nursing Home
401 W. Main St.

Padgett Nursing Home No. 2
117 E. South St.
Whited Nursing Home
308 N. Capitol St.

MT. VERNON (Jefferson County)
Lowry's Nursing Home
1304 Main St.
Setzekorn Nursing Home
1300 Broadway

MT. ZION (Macon County)
Woodland Inc., Nursing Home

MOWEAQUA (Shelby County)
Moweaqua Nursing Home

MUNDELEIN (Lake County)
Pine Manor
Rte. 1, Box 185, Half Day Rd.

MURPHYSBORO (Jackson County)
Dillow Nursing Home
316 N. Ninth St.
Jackson County Nursing Home
1441 N. 14th St.
Tyler Nursing Home, Inc.
1711 Spruce St.

NAPERVILLE (DuPage County)
Americana Nursing Center (2)
200 Martin Dr.
Brentwood Nursing Home
134 N. Washington St.

NILES (Cook County)
Gross Point Manor (1)
6601 Touhy Ave.
Svithiod Nursing Home
880 Grace St.

NORMAL (McLean County)
Baltz Nursing Home, Inc.
502 N. Broadway
Brokaw Nursing Home
Virginia and Franklin Sts.

NORTHBROOK (Cook County)
Eden View Convalescent and
Geriatric Center
222 Frontage Rd.
Northbrook Nursing Home &
Rehabilitation Center, Inc.
270 Skokie Rd.

OAK LAWN (Cook County)
Concord Nursing Home (2)
9401 S. Ridgeland
Doyle Nursing and Convalescent Homes, Inc.
5432 W. 87th St.
Parkside Gardens Nursing Home
5701 W. 79th St.

OAK PARK (Cook County)
Oak Park Nursing Home, Inc.
637 S. Maple Ave.
Patterson Nursing & Rehabilitation Care
130 N. Austin Blvd.
The Woodbine
6909 W. North Ave.

ODIN (Marion County)
Wutzler Nursing Home
Kirkwood St.
Yaw Nursing Home
Laury St.

O'FALLON (St. Clair County)
Herpin Nursing Home
308 W. State St.

OKAWVILLE (Washington County)
Washington Springs Nursing Home

OLNEY (Richland County)
Burgin Nursing Home No. 1
305 S. Washington St.
Burgin Nursing Home No. 2
607 S. Elliott St.
Golden Years Nursing Home
502 S. Fair St.
Marks Nursing Home
217 N. Fair St.

ONARGA (Iroquois County)
Jones Nursing Home
317 N. Walnut St.

ORANGEVILLE (Stephenson County)
Krug Convalescent Home
High St.

OREGON (Ogle County)
Eventide Nursing Home
403 S. Third St.

OTTAWA (LaSalle County)
Hassley's Health Haven
Gentleman Rd., R. R. 4
Hayes Nursing Home
427 E. Main St.
Highland Sanatorium and
Convalescent Home of LaSalle County
800 Center St.
Susie H. Moore Rest and Healing Home
627 Third Ave.

PALATINE (Cook County)
Aage House
234 N. Plum Grove Rd.
Bee Dozier's Palatine Nursing Home
W. Dundee Rd.
Catherine Memorial Home
Meacham Rd.
Plum Grove Nursing Home, Inc. (2)
24 S. Plum Grove Ave.
Zielinski Nursing Home
95 W. Emmerson St.

PANA (Christian County)
De Paepe-Ashcraft Nursing Home
10 Oak St.

PARK RIDGE (Cook County)
Park Ridge Terrace
665 Busse Hwy.

PAXTON (Ford County)
Ford County Nursing Home
R. R. 2
Lyons Nursing Home
440 E. Pells St.

PEKIN (Tazewell County)
Floy's Nursing Home
803 Park Ave.
Knollcrest Nursing Home, Inc.
Allentown Rd.
Snyder's Convalescent Home
328 Buena Vista

PEORIA (Peoria County)
Baker Nursing Home
500-502 W. Second St.
Bel-Wood Nursing Home
7023 W. Planck Rd.
Flora E. Butler Nursing Home
305 Third St.
Healthatorium
408 N. Monroe St.
High View Nursing Home (2)
2308 W. Nebraska St.
Mahoney Nursing Home No. 1
444 W. Second St.
Mahoney Nursing Home No. 2
2149 N. Knoxville St.
Sweeney Convalescent Home
144-146 Randolph St.
Walker Nursing Home
1504 W. Garden St.

PERU (LaSalle County)
Tri City Nursing Home
2804 Sixth St.

PETERSBURG (Menard County)
Sunny Acres
Menard County Home
Rte. 3

PITTSFIELD (Pike County)
Couch Nursing Home
521 E. Washington St.
Couch Nursing Home No. 2
531 E. Washington St.
Pittsfield Convalescent Home
411 W. Washington St.

PLYMOUTH (Hancock County)
Myrtle Sapp's Nursing Home
Main St.

PONTIAC (Livingston County)
Livingston County Nursing Home
R. R. 1

PRAIRIE CITY (McDonough County)
Westfall K & C Nursing Home
Reed and Union Sts.
Westfall Nursing Home

PRINCETON (Bureau County)
Prairie View Nursing Home
R. R. 5

PROSPECT HEIGHTS (Cook County)
Weinert Nursing Home
511 Schoenbeck Rd.

QUINCY (Adams County)
Boll Nursing Home
1029 Jersey St.
Eloise Nursing Home
1614 N. Fourth St.
Hall Nursing Home
1870 Vermont St.
Parker Nursing Home
431 Locust St.
St. Joseph's Nursing Home
1315 N. Eighth St.
Theda Boll Nursing Home
438 N. Twelfth St.

RAYMOND (Montgomery County)
Cottage Nursing Home
W. Sparks St.

ROANOKE (Woodford County)
Roanoke Manor, Inc.
1102 W. Randolph St.

ROBINSON (Crawford County)
Robinson Nursing Home
503 E. Main St.

ROCK FALLS (Whiteside County)
Riverview Nursing Home
308 E. Second St.

ROCKFORD (Winnebago County)
Deacon Home
611 N. Court St.
Hill Top Nursing Home
728 N. Court St.
Lund Nursing Home
1503 Fourth Ave.
Rockford Municipal Sanitarium
Nursing Home
1601 Parkview Ave.
The Restorium
2800 S. Main St.
River Bluff Nursing Home
N. Main Rd.
Smith Nursing Home
1234 Sixth Ave.
Sarver Convalescent Home, Inc.
2430 S. Main St.

ROCK ISLAND (Rock Island County)
Mrs. Carroll's Nursing Home
4434 Seventh Ave.
Parkway Rest Home
557-30th St.
Shady Lawn Nursing Home, Inc.
1018 Twelfth St.

ROSEVILLE (Warren County)
Roseville Nursing Home
N. Main St.

ROSSVILLE (Vermilion County)
Hedrecka Nursing Home
R. R. 2

ROUND GROVE (Whiteside County)
Whiteside County Nursing Home

RUSHVILLE (Schuyler County)
Hills Convalescent Home
717 E. Adams
Snyder Nursing Home
245 N. St. Louis St.

RUTLAND (LaSalle County)
Rutland Nursing Home, Inc.
E. Front and Chestnut St.

ST. CHARLES (Kane County)
Valley Rest Home
309 S. Sixth Ave.

SANDWICH (DeKalb County)
Sandhaven, Inc.
517 N. Main St.

SAYBROOK (McLean County)
Kinsell's Nursing Home, Inc.
205 N. Main St.

SHANNON (Carroll County)
Johnson's Nursing Home
SHELBYVILLE (Shelby County)
Young's Shelbyville Restorium, Inc.
Rte. 128 North
SHELDON (Iroquois County)
Happy Siesta Nursing Home
220 E. Center St.
SIDELL (Vermilion County)
Fairview Alliance Home (3)
R. R. 1
SILVIS (Rock Island County)
Happy Haven Rest Home
118 Tenth St.
SKOKIE (Cook County)
Old Orchard Manor
4660 Old Orchard Rd.
Skokie Valley Manor, Inc.
4600 Simpson St.
SMITHBORO (Bond County)
American Nursing Home
SOUTH HOLLAND (Cook County)
Colonial Convalescent Home
549 E. 162nd St.
SPARTA (Randolph County)
Randolph County Nursing Home
W. Belmont
SPRINGFIELD (Sangamon County)
Beard Nursing Home
925 S. Seventh St.
Carver Convalescent Home
1527 E. Washington St.
Claudia's Nursing Home
409 N. Grand Ave. East
Colonial Cottage
116 S. State St.
Edwards Manor Nursing Home, Inc.
1625 E. Edwards St.
Hamilton Nursing Home
925 N. Fifth St.
Homestead Convalescent Home
and Nursing Residence
127 N. Douglas Ave.
Phillips Nursing Home
630 N. Sixth St.
Ramshaw Retirement Home No. 1
631 N. Sixth St.
Ramshaw Retirement Home No. 2
611 N. Sixth St.
Ridgewood Nursing Home
3400 Peoria Rd.
Rutledge Manor Care Home, Inc.
819 N. Rutledge
Springfield Haven
429 N. Sixth St.
Standage Nursing Home
2205 E. Capitol Ave.
The Wrightwood
720 S. Pasfield
STERLING (Whiteside County)
Colonial Acres Rest Home
Rte. 2
Linton Nursing Home
908 W. Third St.
STICKNEY (Cook County)
Pershing Convalescent Home
6803 W. Pershing Rd.
STOCKTON (Jo Daviess County)
Morgan Nursing Home
205 E. Benton Ave.
Morgan Memorial Home
501 E. Front Ave.
STREATOR (LaSalle County)
Cheery Rest Nursing Home
407 E. Hickory St.
Star Haven Convalescent and
Nursing Home
405 N. Wasson St.
Edgetown Nursing Home
Richards and Chicago Sts.
SULLIVAN (Moultrie County)
Misenheimer Nursing Home
721 W. Harrison St.
Singiser Nursing Home
817 E. Jackson St.
SUMNER (Lawrence County)
Milligan Nursing Home
Railroad St.
Poland's Christian Nursing Home
201 W. South St.
TALLULA (Menard County)
Tallula Walker Nursing Home
TAYLORVILLE (Christian County)
Dexheimer Manor
Rte. 48 North
Dexheimer Nursing Home
216 E. Franklin St.
Smith's Guest Home
305 E. Adams St.
Taylorville Nursing Home
405 N. Silver St.
TINLEY PARK (Cook County)
Kosary Convalescent Home
6660 W. 147th St., R. R. 2
McAllister Nursing Home
18200 S. Cicero Ave.
McAllister Nursing Home No. 2
1834 LaVerne Rd.
TONICA (LaSalle County)
Dyer Nursing Home
Second and Elm Sts.
TOULON (Stark County)
Public Convalescent Home
291 S. Franklin St.
TREMONT (Tazewell County)
Tazewell County Nursing Home
R. R. 1
TROY (Madison County)
Rockwood Rest Home
212 N. Powell St.
TUSCOLA (Douglas County)
Martin Nursing Home
114 E. Daggy St.

URBANA (Champaign County)
Champaign County Nursing Home
1701 E. Main St.
Hubert Nursing Home
505 W. Green St.
VANDALIA (Fayette County)
Fayette County Hospital Annex
727 W. Jackson
Fayette County Nursing Home
R. R. 3
Rose Haven Nursing Home
117 S. Seventh St.
VIENNA (Johnson County)
Hill View
VILLA GROVE (Douglas County)
Maple Rest Home
710 E. Elm St.
VILLA PARK (DuPage County)
Acre View Nursing Home
538 S. Villa Ave.
VIRDEN (Macoupin County)
Miller's Nursing Home
231 E. Deane St.
VIRGINIA (Cass County)
Kirkpatrick Nursing Home
145 N. Front St.
Walker Nursing Home
530 E. Beardstown St.
WARREN (Jo Daviess County)
Daters Nursing Home
Water St.
Lahey Nursing Home
Burnett St.
Sunnyside Nursing Home
206 Lions St.
WASHBURN (Woodford County)
Atteberry Nursing Home
Parkside Dr.
WASHINGTON (Tazewell County)
Washington Nursing Center, Inc. (2)
1110 New Castle Rd.
Washington Nursing Home, Inc. (3)
104 E. Holland St.
WATERMAN (DeKalb County)
Bellevue Place
310 N. Elm St.
WATERLOO (Monroe County)
Monroe County Nursing Home
Illinois Ave.
WATSEKA (Iroquois County)
Iroquois Resident Home
830 S. Fourth St.
WAVERLY (Morgan County)
Bridges Nursing Home
200 E. State St.
WENONA (Marshall County)
Wenona Rest Haven, Inc.
Elm St.
WEST CHICAGO (DuPage County)
Hazelhurst Farm
Roosevelt and Gary Mill Rd.,
Box 216
Morton Manor Health Home
R. R. 1, Box 753
WEST SALEM (Edwards County)
Gaede's Nursing Home
WHEATON (DuPage County)
DuPage County Convalescent Home
County Farm Rd.
Wheaton Health Resort, Inc.
1325 Manchester Rd.
WHITE HALL (Greene County)
Hill Top Haven
McCarthy Ave. and U. S. Rte. 67A
WILMETTE (Cook County)
Marie's Diet and Rest Home
1011 Central Ave.
WINFIELD (DuPage County)
Zace Retirement Home
27 W. 141 Liberty St.
WITT (Montgomery County)
Laura Charles Nursing Home
WOOD DALE (DuPage County)
Wood Dale Nursing Home
140 Hemlock
WOODSTOCK (McHenry County)
Birchwood Nursing Home
R. R. 1
Woodstock Residence, Inc.
309 McHenry Ave.
WORTH (Cook County)
Rest Haven Illiana Christian
Convalescent Home, Inc.
13259 S. Central Ave.
ZION (Lake County)
Parkview Nursing Home
1911-27th St.
Zion Nursing Home
2561 Sheridan Rd.

SHELTERED CARE HOMES

A sheltered care home is equipped and staffed to provide only personal services such as assistance with meals, dressing, bathing, etc., but not nursing care.

ALEDO (Mercer County)
Fortner Shelter and Care Home
1006 E. Fifth St.
ALTON (Madison County)
Alby Street Sheltered Care Home
1912 Alby St.
Griffin Sheltered Care Home
1914 Washington Ave.
Mitchell Sheltered Care Home
1800 Belle St.
Stahl Shelter Care Home
1414 Milton St.
ANNA (Union County)
Dodson Shelter Care Home
300 South St.
Galbraith Home
223 W. Vienna St.
Melvin's Sheltered Care Home
E. Davie St.

Pitts Sheltered Care Home
310 E. Davie St.
ARROWSMITH (McLean County)
Murrell's Guest Home
ASHLAND (Cass County)
Burch Home
BARRY (Pike County)
Tittsworth Sheltered Care Home
Rogers St.
BEARDSTOWN (Cass County)
Green Sheltered Care Home
314 Monroe St.
BELLEVILLE (St. Clair County)
Cerneka Sheltered Care Home
404 N. Charles St.
Gorski Old Folks Home
1412 W. Main St.
Gribler Sheltered Care Home
511 S. Charles St.
Mil-Ran Retirement Home
4 Gundlach Pl.
BENTON (Franklin County)
Bowling Sheltered Care Home
114 E. Webster St.
Cockrum Sheltered Care Home
314 S. Main St.
Higgerson's Home
209 N. Eighth St.
Wertz's Sheltered Care Home
217 Pope St.
BLOOMINGTON (McLean County)
Golden Age Home
412 N. Roosevelt Ave.
Hanson Sheltered Care Home
909 S. Center St.
Lowrey Shelter Care Home
903 W. Mulberry St.
Youngblom's Sheltered Care Home
1108 N. Prairie St.
BRADLEY (Kankakee County)
Evans Shelter Care Home
496 S. Wabash St.
BRIDGEPORT (Lawrence County)
Bridgeport Sheltered Care
888 Corporation St.
BRIGHTON (Jersey County)
Post Sheltered Care Home
Strack St., P. O. Box 161
BUSHNELL (McDonough County)
Heron's Golden Age Home
257 E. Hail St.
CAMBRIDGE (Henry County)
Pine Lodge Home
112 E. Center St.
CANTON (Fulton County)
Sunset Home
135 S. First St.
CASEY (Clark County)
Rude's Goodwill Shelter Home
110 E.Monroe St.
CENTRALIA (Marion County)
Aldag Sheltered Care Home
603 N. Walnut St.
CHEBANSE (Iroquois County)
Morgan Manor
243 S. First St.
CHAMPAIGN (Champaign County)
Boyd's Sheltered Care Home
Springfield St.
Painter's Sheltered Care Home
406 S. Prairie St.
CHEBANSE (Kankakee County)
Chebanse Guest House
372 Orchard St.
CHARLESTON (Coles County)
Teaters Sheltered Care Home
Fifth and Jackson Sts.
Young Sheltered Care Home
763 Tenth St.
CHESTER (Randolph County)
Padgett's Pot-A-Pourri Rest Home
647 State St.
CHICAGO (Cook County)
Kraus Home, Inc.
1620 W. Chase Ave.
CLIFTON (Iroquois County)
Victory Inn
195 E. Fifth St.
COBDEN (Union County)
Tripp Sheltered Care Home
Box 323
COLLINSVILLE (Madison County)
Butler Home
413 Vandalia St.
COULTERVILLE (Randolph County)
Coulterville Sheltered Care Home
Seventh and Cedar Sts.
DALLAS CITY (Henderson County)
Holland Sheltered Care Home
69 E. Maine St.
DANVERS (McLean County)
Holman Shelter Care Home
300 E. Exchange St.
DECATUR (Macon County)
Borders Sheltered Care Home
1590 N. Water St.
Gladville Home
1013 W. Wood St.
Herr Shelter Care Home
328 N. Edwards St.
Lindsey Rest Home
737 W. Wood St.
Osborne Sheltered Care Home
1860 N. Broadway St.
DONGOLA (Union County)
Keller Sheltered Care Home
Box 634
DUQUOIN (Perry County)
Miller Sheltered Care Home
24 S. Line St.
EAST MOLINE (Rock Island County)
Fronk's Home
460 Nineteenth St.
EAST ST. LOUIS (St. Clair County)
Carr Sheltered Care Home
3112 Bond St.

Park Retirement Home
2246 N. 57th St.
Popejoy's Retirement Home
1504 Illinois Ave.

EFFINGHAM (Effingham County)
Ireland Sheltered Care Home
111 Forest St.
Marks Sheltered Care Home
500 Clinton Ave.

ELDORADO (Saline County)
Murray Hotel
900 Fifth St.

ELGIN (Kane County)
Highland Manor
753 W. Highland
The Oliver Annex
364 St. Charles St.
Restville House Unit 2
15-17 S. Channing St.
Victorian Manor
303 Douglas Ave.

ENFIELD (White County)
Fields Shelter Care Home
W. Main St.

FLAT ROCK (Crawford County)
Roe Boarding Home
P. O. Box 156

FULTON (Whiteside County)
Snyder Home
719 Twelfth St.

GALESBURG (Knox County)
Clay Sheltered Care Home
319 W. North St.
Halls Sheltered Care Home
659 N. Seminary St.
Hanson's Sheltering Care
1179 E. Main St.
Johnson Sheltered Care Home
736 N. Kellogg St.
Woodward Shelter Home
1188 W. Main St.

GOLCONDA (Pope County)
Rose View Sheltered Care Home
Washington and Harrison Sts.

GREENUP (Cumberland County)
Peter's Sheltered Care Home
308 N. Kentucky St.

GREENVILLE (Bond County)
Hilltop House
202 N. Fourth St.
Horsfall Sheltered Care Home
201 S. Second St.

IRVING (Montgomery County)
Mi-Edd Shelter Home
Pearl's Shelter Home

JACKSONVILLE (Morgan County)
Bell Sheltered Care Home
602 Jordan St.
Blue Sheltered Care Home
506 W. Morton Ave.
Brown Sheltered Care Home
716 W. College Ave.
Hardy Sheltered Care Home
830 W. College Ave.
Hoots Rest Home
717 E. Douglas St.
Parker Sheltered Care Home
203 W. Beecher Ave.

JERSEYVILLE (Jersey County)
Gibson Sheltered Care Home
301 W. Pine St.
Stark's Sheltered Care Home
600 N. Liberty St.

JOHNSTON CITY (Williamson County)
Cazaleen's Sheltered Care Home
207 E. Fifth St.
Nellie Ernfelt Home
R. R. 1

JONESBORO (Union County)
Henard Sheltered Care Home
204 S. Main St.

KAMPSVILLE (Calhoun County)
Smith Sheltered Care Home

KANKAKEE (Kankakee County)
Bethel Shelter Home
556 E. Oak St.
Geeding Shelter Home
139 S. Greenwood Ave.
Manor House of Eventide Homes, Inc.
1113 E. Court St.
McCray Shelter Home
152 S. Greenwood Ave.
Mowers Guest Home
380 S. Greenwood Ave.
Oaklawn Home
191 N. Washington Ave.
Oaks Shelter Home
453 E. Chestnut St.
Parker Sheltered Care Home
390 N. Chicago Ave.
Royal Shelter Home
195 N. Entrance Ave.

KEWANEE (Henry County)
Lofgren Duncan Manor
218 S. Tremont St.

LA HARPE (Hancock County)
Gillett Home
W. Main St.

LEXINGTON (McLean County)
Rose Lawn Shelter Care Home
207 N. Elm St.

LOVINGTON (Moultrie County)
Gaddis Sheltered Care Home, Inc.
240 E. State St.

MANTENO (Kankakee County)
Wooley's Home
272 W. Fourth St.

MARION (Williamson County)
Miner Shelter Care Home
205 E. Marion St.

MARSHALL (Clark County)
Dunkel Sheltered Care Home
325 S. Sixth St.
Marshall Christian Hotel
805 Archer Ave.

McCONNELL (Stephenson County)
Muggler Sheltered Care Home
Main St.
METROPOLIS (Massac County)
Anderson's Sheltered Care Home
205 Metropolis St.
MILFORD (Iroquois County)
Golden Jubilee Home
28 S. West Ave.
MOLINE (Rock Island County)
Hendren's Sheltered Care Home
2606 Sixth Ave.
Hensley Home
1111 Fifteenth St.
Paul's Boarding Home
849 Fifteenth St.
MOMENCE (Kankakee County)
Momence Shelter Home
229 E. Indiana Ave.
MONMOUTH (Warren County)
Galusha Sheltered Care Home
323 N. Second St.
MT. CARMEL (Wabash County)
Holiday Rest Home
122 E. Third St.
MT. VERNON (Jefferson County)
Cunningham Sheltered Care Home
1917 Casey St.
Hearthside Sheltered Care Home
318 N. Ninth St.
MULBERRY GROVE (Bond County)
Smith's Sheltered Care Home
111 S. Maple St.
NEWTON (Jasper County)
Hickox Sheltered Care Home
438 S. Lafayette St.
OBLONG (Crawford County)
Fouty's Sheltered Care Home
411 S. Garfield St.
Oblong Sheltered Care Home
106 N. Garfield St.
ODELL (Livingston County)
The Odell Shelter, Inc.
17 Henry St.
OLD MARISSA (St. Clair County)
Old Marissa Sheltered Care Home
OLNEY (Richland County)
Braden Sheltered Care
230 E. North Ave.
Miller Sheltered Care Home
103 E. Lafayette St.
PAW PAW (Lee County)
Pfeiffer Sheltered Care Home
PERU (LaSalle County)
Hillview Manor
2106 Market St.
PLYMOUTH (Hancock County)
Thomas Sheltered Care Home
Box 323
PRINCETON (Bureau County)
Princeton Sheltered Care Home
423 Lincoln St.
PRINCEVILLE (Peoria County)
Seven Oaks
Douglas and Tremont Sts.
QUINCY (Adams County)
Sims Shelter House
1619 N. Fourth St.
ROCHELLE (Ogle County)
Joyce Old Folks Home
609 N. Sixth St.
ROCKFORD (Winnebago County)
Bethany House
412 N. Court St.
Fieselman's Sheltered Care Home
R. R. 2, Tipple Rd.
Parkview Sheltered Care Home
408 N. Horsman St.
Pearson Home
2029 Forest View Rd.
ROODHOUSE (Greene County)
Dameron Shelter Care Home
114 E. Palm St.
ROSEVILLE (Warren County)
Bycroft Sheltered Home
RUSHVILLE (Schuyler County)
Lacey's Sheltered Care Home
239 W. Clay St.
ST. FRANCISVILLE (Lawrence County)
Marguerite Tetidrick Shelter Care
Main St.
ST. JACOB (Madison County)
Robards Home
R. R. 1, Box 9
SALEM (Marion County)
Hogge's Sheltered Care Home
521 E. Church St.
SANDOVAL (Marion County)
Finn's Sheltered Care Home
W. North Second St.
SAVANNA (Carroll County)
Panacea
316 Chicago Ave.
SAYBROOK (McLean County)
Maplebrook
Main St.
SHELDON (Iroquois County)
Huss Sheltered Care Home
390 N. Fourth St.
SPARTA (Randolph County)
Krzebie Shelter Home
411 S. St. Louis St.
SPRINGFIELD (Sangamon County)
Gannar Cerebral Palsy Home
910 S. Second St.
Lane Bryant Retirement Home
1712 E. Washington St.
Mayol Sheltered Care Home
723 E. Reynolds St.
Peart Sheltered Care Home
1010 S. Second St.
Sunshine Guest Home
607 S. Fifth St.

STERLING (Whiteside County)
Hill Home
507 E. Third St.
STREATOR (LaSalle County)
Hillview Sheltered Care Home
518 S. Bloomington St.
SULLIVAN (Moultrie County)
Beals Sheltered Care Home
13 S. McClellan St.
SYCAMORE (DeKalb County)
Miller Guest Home
309 N. California
THOMSON (Carroll County)
Maple Lawn Home
TILTON (Vermilion County)
Smoot Memorial Home
215 W. Sixth St.
Wangler Sheltered Care Home
605 E. Fifth St.
URBANA (Champaign County)
Lustig Sheltered Care Home
904 W. Clark St.
WASHBURN (Marshall County)
Moulton's Sheltered Care Home
WATSEKA (Iroquois County)
Pleasant Lodge
590 E. Grant St.
WAUKEGAN (Lake County)
Marseilles Retirement Home, Inc.
604 N. Genesee St.
WAVERLY (Morgan County)
Tosh Sheltered Care Home
405 S. Miller St.
WEST FRANKFORT (Franklin County)
Peacock Sheltered Care Home
309 W. Oak St.
Rankin Sheltered Care Home
312 E. Fourth St.
WHITE HALL (Greene County)
Bateman Sheltered Care Home
535 N. Main St.
Elliott Sheltered Care Home
601 N. Main St.
Powell Sheltered Care Home
144 E. Lincoln St.
Shanahan Sheltered Care Home
431 Centennial St.
WINCHESTER (Scott County)
Oak Rest Sheltered Care Home
206 High St.
YORKVILLE (Kendall County)
Himes Sheltered Care Home
N. Bridge St.
ZION (Lake County)
Robbins Home
3220 Emmans Ave.

HOMES FOR THE AGED

A home for the aged is operated not-for-profit under religious or fraternal auspices or under an endowment. It is primarily for persons over 60 years of age and may provide personal care only or nursing and personal care. Some of these homes for the aged provide special services over and above nursing care.

In this section, the following symbols are used: A—sheltered care facilities, B—nursing care facilities, and C—special geriatric facilities.

ALHAMBRA (Madison County)
Hitz Memorial Home—AB
Belle St.
ALTON (Madison County)
Alton Woman's Home—A
2224 State St.
ARLINGTON HEIGHTS (Cook County)
Lutheran Home and Service for the Aged—AB
800 W. Oakton St.
ARTHUR (Moultrie County)
The Arthur Home—B
423 Eberhardt Dr.
AUBURN (Sangamon County)
Parks Memorial Home—AB
304 Maple St.
AURORA (Kane County)
Jennings Terrace—AB
275 S. LaSalle St.
Sunnymere, Inc.—AB
925 Sixth Ave.
BELLEVILLE (St. Clair County)
St. Elizabeth's Home for the Aged—AB
211 S. Third St.
St. Paul's Home—AB
1021 W. "E" St.
BENSENVILLE (DuPage County)
Bensenville Home Society—AB
York and Memorial Dr.
BLOOMINGTON (McLean County)
Jessamine Withers Home—A
305 W. Locust St.
BROOKFIELD (Cook County)
The British Home—AB
31st and McCormick Ave.
CANTON (Fulton County)
Nancy and Ann Kelley Home for the Aged—A
344 W. Chestnut St.
CARLYLE (Clinton County)
St. Mary's Home for the Aged—A
501 Clinton St.
CHAMPAIGN (Champaign County)
The Garwood Home—A
1515 N. Market St.
CHESTER (Randolph County)
St. Ann's Home—B
770 State St.
CHICAGO (Cook County)
Augustana Home for the Aged—AB
7540 Stony Island Ave.
Bethany Home—AB
5015 N. Paulina St.
Bohemian Home for Children and the Aged—AB
5061 N. Pulaski Rd.

Chicago Holland Home for the Aged—AB
240 W. 107th Pl.
Church Home for Aged Persons—AB
5435-45 Ingleside Ave.
Covenant Home—AB
2725 W. Foster Ave.
Drexel Home, Inc—ABC
6140 Drexel Ave.
Fridhem Baptist Home—AB
11404 S. Bell Ave.
George J. Goldman Memorial Home for the Jewish Aged—AB
1152 W. Farwell Ave.
Home of the Association of Jewish Blind—AB
3525 W. Foster Ave.
Jane Dent Home—A
4430-32 Vincennes Ave.
Little Sisters of the Poor—AB
5148 Prairie Ave.
Methodist Old Peoples Home—AB
1415 Foster Ave.
Northwest Home for the Aged—AB
2201 N. Sacramento Ave.
Norwegian Lutheran Bethesda Home—AB
2833 N. Nordica Ave.
Norwood Park Home—AB
6016 N. Nina Ave.
The Old People's Home of the City of Chicago—AB
909 Foster Ave.
Orthodox Jewish Home for the Aged—ABC
1648 S. Albany Ave.
Park View Home—ABC
1401 N. California Ave.
Sacred Heart Home—AB
1550 S. Albany Ave.
St. Augustine—AB
2358 N. Sheffield Ave.
St. Joseph's Home for the Aged—AB
2650 N. Ridgeway Ave.
St. Paul's House—A
3831 N. Mozart St.
Selfhelp Home for the Aged—A
4941 S. Drexel Blvd.
Society for the Danish Old People's Home—AB
5656 N. Newcastle Ave.
Washington and Jane Smith Home—ABC
2340 W. 113th Pl.

DANVILLE (Vermilion County)
Webster Memorial Home—A
903 N. Logan Ave.

DECATUR (Macon County)
Anna B. Millikin Home—A
200 N. Oakland Ave.

ELBURN (Kane County)
Fellowship Deaconry—A
526 N. Main St.

ELGIN (Kane County)
Oak Crest Residence—AB
204 S. State St.

EUREKA (Woodford County)
Maple Lawn Homes—AB

EVANSTON (Cook County)
Alonzo Mather Aged Ladies Home—AB
1615 Hinman Ave.
Homecrest Foundation—A
1430 Chicago Ave.
James C. King Home for Old Men—AB
1555 Oak Ave.
Lake Crest Villa—A
2601 Central St.
Pioneer Place—AB
2320 Pioneer Rd.
Presbyterian Home—AB
3200 Grant St.

FOREST PARK (Cook County)
Altenheim (German Old Peoples Home)—AB
7824 Madison St.

FREEPORT (Stephenson County)
Freeport Bensenville Home—A
822 W. Stephenson St.
St. Joseph Home for the Aged—AB
649 E. Jefferson St.

GIRARD (Macoupin County)
The Home—A

GURNEE (Lake County)
Independent Order of Vikings Home for Aged Members—AB
Grand Ave.

HIGHLAND (Madison County)
Highland Home—A
1600 Walnut St.

HIGHLAND PARK (Lake County)
Villa St. Cyril—AB
1111 St. Johns Ave.

HINSDALE (Cook County)
King-Bruwaert House—AB
6101 County Line Rd.

HINSDALE (DuPage County)
Godair Home—AB
6259 S. Madison St.

JACKSONVILLE (Morgan County)
Illinois Christian Home, Inc.—AB
873 Grove St.

JOLIET (Will County)
Our Lady of Angels Retirement Home—A
1201 Wyoming Ave.
Salem Home for the Aged—AB
1313 Rowell Ave.

JUSTICE (Cook County)
Rosary Hill Convalescent Home—AB
9000 W. 81st St.

KEWANEE (Henry County)
St. Bernadette Manor—A
Elliott St.

KNOXVILLE (Knox County)
Illinois P.E.O. Home—A
415 E. Main St.

LA GRANGE PARK (Cook County)
Plymouth Place—AB
315 N. LaGrange Rd.

LAKE VILLA (Lake County)
German Hungarian Old Peoples Home Association—A
Grand Ave.

LIBERTYVILLE (Lake County)
St. John's of Allendale—A
59A and Milwaukee Rd.
LINCOLN (Logan County)
Deaconess Memorial Home Annex—A
315 Eighth St.
LYONS (Cook County)
Illinois Colony Club Home for Aged—AB
7515 Ogden Ave.
MACOMB (McDonough County)
Everly House—A
811 S. Lafayette St.
MACON (Macon County)
Eastern Star Home at Macon—AB
MATTOON (Coles County)
Illinois I.O.O.F. Old Folk's Home—AB
E. Lafayette St.
MAYWOOD (Cook County)
Maywood Baptist Home—AB
316 Randolph St.
Maywood Home for Soldiers Widows—A
224 N. First Ave.
MEADOWS (McLean County)
Meadows Mennonite Home—A
MENDOTA (LaSalle County)
Mendota Lutheran Home—A
504 Sixth St.
MORRISON (Whiteside County)
Resthaven Home of Whiteside County—A
Maple Ave.
MT. CARROLL (Carroll County)
Caroline Mark Home—A
222 E. Lincoln St.
MT. MORRIS (Ogle County)
Brethren Home—AB
402 S. Wesley Ave.
NEW ATHENS (St. Clair County)
New Athens Home—AB
203 S. Johnson St.
NILES (Cook County)
St. Andrew Home for the Aged—AB
7000 N. Newark Ave.
St. Benedict's Home for the Aged—AB
6930 W. Touhy Ave.
NORRIDGE (Cook County)
Central Baptist Home for the Aged—AB
7901 W. Lawrence Ave.
NORTHLAKE (Cook County)
Villa Scalabrini—AB
Wolf Rd. and Palmer St.
NORTH RIVERSIDE (Cook County)
Scottish Old Peoples Home—AB
28th St. and DesPlaines Rd.
ORLAND PARK (Cook County)
Holy Family Villa—AB
123rd St.
OTTAWA (LaSalle County)
Cora J. Pope Home—A
116 W. Prospect St.
Pleasant View Luther Home—AB
505 College Ave.
PARK RIDGE (Cook County)
St. Matthew United Lutheran Home—AB
1601 N. Western Ave.
PAXTON (Ford County)
Illinois Knight Templar Home for the Aged Infirm—B
706 S. Washington St.
PEORIA (Peoria County)
Apostolic Christian Home—A
711 N.E. Monroe Ave.
Christian Buehler Memorial Home—AB
3415 N. Sheridan Rd.
Guyer Memorial Home—A
201 W. Columbia Terr.
John C. Proctor Endowment Home—AB
1301 N.E. Glendale Ave.
St. Joseph's Home for the Aged—AB
2223 W. Heading Ave.
PEOTONE (Will County)
Peotone Bensenville Home—A
Wood and West Sts.
PONTIAC (Livingston County)
Evenglow Lodge—A
Chicago and Washington Sts.
Humiston Haven—AB
300 W. Lowell St.
PRINCETON (Bureau County)
Adeline E. Prouty Home—A
508 Park Ave. East
QUINCY (Adams County)
Anna Brown Home for the Aged—AB
1507 N. Fifth St.
Good Samaritan Home—AB
2130 Harrison St.
Methodist Sunset Home—AB
418 Washington St.
St. Vincent's Home—A
1340 N. Tenth St.
ROCKFORD (Winnebago County)
Eastern Star Home of Rockford—AB
2400 S. Main St.
P. A. Peterson Home—AB
1301 Parkview Ave.
Winnebago Home for the Aged—AB
Box 76-A, Safford Rd.
ROCK ISLAND (Rock Island County)
Cleaveland Home for the King's Daughters of Illinois, Inc.—A
805 Nineteenth St.
ROUND GROVE (Whiteside County)
The Martin Home for Old Folks—B
SPRINGFIELD (Sangamon County)
Carrie Post King's Daughters Home for Women—A
541 Black Ave.
Illinois Presbyterian Home—A
W. Lawrence at Chatham Rd.
Mary Bryant Home—B
1100 S. Fifth St.
St. Joseph's Home for the Aged—A
S. Sixth Street Rd.
SULLIVAN (Moultrie County)
Illinois Masonic Home—AB

TECHNY (Cook County)
St. Ann's Home and Infirmary—AB
Waukegan Rd.
VIRDEN (Macoupin County)
Mothers' Memorial Baptist Home—AB
402 W. Loud St.
WHEELING (Cook County)
Addolorata Villa—AB
Hwy. 83, McHenry Rd.
WILMETTE (Cook County)
Baha'i Home—A
401 Greenleaf Ave.
Maryhaven, Inc.—AB
2228 Beechwood Ave.
WOODSTOCK (McHenry County)
Sunset Manor, Inc.
920 Seminary Ave.
ZION (Lake County)
Bethesda of the Christian Catholic Church—A
2516-22 Elisha Ave.

CIVIL DEFENSE EMERGENCY HOSPITALS IN ILLINOIS

(As of January, 1964)

PREPOSITIONED

ALTON (Madison County)
Alton State Hospital
(Linden Cottage Basement)
ANNA (Union County)
Illinois State Hospital—Building #4
and Hamilton Hall
CAIRO (Alexander County)
Cairo Garage
Ohio Street
CARLINVILLE (Macoupin County)
Carlinville Community High School
CENTRALIA (Marion County)
City Hall
CHARLESTON (Coles County)
Eastern Illinois University—7th Street
CHICAGO HEIGHTS (Cook County)
City Hall
DANVILLE (Vermilion County)
St. Elizabeth's Hospital
DECATUR (Macon County)
Decatur Municipal Airport Hangar #4
DIXON (Lee County)
Dixon State School Garages 19, 20 and 21
DUQUOIN (Perry County)
Illinois Central Depot, E. Main St.
EDWARDSVILLE (Madison County)
St. Claire School
ELDORADO (Saline County)
Lincoln School, N. State Street
ELGIN (Kane County)
Elgin State Hospital
ERIE (Whiteside County)
Erie Community High School
FLORA (Clay County)
Light and Power Plant Building
GALESBURG (Knox County)
Knox County Court House
Galesburg State Research Hospital Bldg. #169
GARDNER (Grundy County)
Gardner Fire House
HAVANA (Mason County)
Community High School
HIGHLAND PARK (Lake County)
Highland Park Water Plant
JACKSONVILLE (Morgan County)
Veterans Diagnostic Building
JACKSONVILLE (Morgan County)
Jacksonville State Hospital
JERSEYVILLE (Jersey County)
Community Hospital
JOLIET (Will County)
342 Henderson Street
KANKAKEE (Kankakee County)
County Court House (Basement)
Kankakee State Hospital
LAWRENCEVILLE (Lawrence County)
Chevrolet Garage, 10th and State
LINCOLN (Logan County)
Deaconess Memorial Home
Lincoln State Hospital School
MANTENO (Kankakee County)
Manteno State Hospital (General Store)
MATTOON (Coles County)
Kuehne Mfg. Co. Warehouse, South 19th St.
METROPOLIS (Massac County)
Field Building, 2nd and Yasoda Streets
House at 1100 E. 2nd Street
NORMAL (McLean County)
Soldiers & Sailors Children's School
OLNEY (Richland County)
Richland County Court House
PALATINE (Cook County)
Village Hall
PANA (Christian County)
Pana Township Building, Oak & 4th
QUINCY (Adams County)
Ill. Soldiers & Sailors Home
RUSHVILLE (Schuyler County)
Culbertson Hospital (Basement)
SAVANNA (Carroll County)
Savanna Ordnance Depot
SKOKIE (Cook County)
G. C. Searle and Company
URBANA (Champaign County)
Court House, 204 E. Elm Street
WATERLOO (Monroe County)
Monroe County Nursing Home
WEST FRANKFORT (Franklin County)
New Era Building (Dairy)
WHEATON (DuPage County)
DuPage County Civil Defense Control Bldg.

TRAINING

Southern Illinois University, Carbondale
Chicago State Hospital, Chicago
Northern Illinois Univ. Field House,
Northern Illinois University, DeKalb
St. Clair County Control Center, Caseyville
Somanauk Community High School,
Cement Gym, Elmhurst
Police-Fire Building, Evanston
Peoria State Hospital, Bartonville
Can Building, Black Hawk State Park
Salem Memorial Hospital, Bryan Park, Salem
Waukegan Storage Co., Waukegan

DIRECTORY OF SCHOOLS OF NURSING IN ILLINOIS

Associate Degree Programs

A program in nursing leading to an associate degree; generally established in a community or junior college. The curriculum consists of arts and sciences at the junior college level and nursing theory—closely correlated with nursing practice in community hospitals and other facilities. Graduates are prepared to give bedside nursing care to patients in hospitals, nursing homes and similar situations. They are prepared to cooperate and share responsibility for their patients' welfare with other members of the nursing and health staff, and to be self-directive in learning from their experiences as practicing nurses.

Belleville Junior College
2600 W. Main, Belleville

Baccalaureate Degree Programs

A program which combines general education with nursing education, leading to the Bachelor of Science degree with a major in nursing. Its general and professional education are coordinated; literature, fine arts and other liberal education courses are shared with all college students; courses in communication skills and the biological, physical and behavioral sciences serve as the base upon which nursing courses are built. Nursing theory is closely coordinated with nursing practice, under the direction and supervision of the nursing faculty of the college or university, in a variety of hospitals and public health agencies.

Graduates of baccalaureate programs in nursing are prepared for beginning nursing positions in community health services and for advancement, without further formal education, to positions requiring beginning administrative skills such as head nursing.

Graduates also have foundations for continuing personal and professional development and for graduate study in nursing.

Brokaw Collegiate School of Nursing
Illinois Wesleyan University, Bloomington
Loyola University School of Nursing
820 N. Michigan Ave., Chicago
Northern Illinois University
School of Nursing, DeKalb
St. Xavier College, School of Nursing
103rd & Central Park, Chicago
Southern Illinois University
Department of Nursing, Carbondale
University of Illinois, College of Nursing
808 S. Wood St., Chicago

Diploma Programs

A program leading to a diploma in nursing, which is under the auspices of a hospital or which is independently incorporated. The curriculum consists of theory and practice focused on instruction and related clinical experience in the nursing care of patients in hospitals. Graduates have the understanding and skills necessary to organize and implement a plan of nursing that will meet the immediate needs of one or more patients and that will promote the restoration of health. They are also able to plan with associated health personnel for the care of patients, and may be responsible for the direction of other members of the nursing team.

Alexian Brothers Hospital
2331 N. Lakewood, Chicago
Alton Memorial Hospital
Memorial Dr., Alton
Augustana Hospital
411 W. Dickens, Chicago
Blessing Hospital
1005 Broadway, Quincy
Julia F. Burnham School
Burnham City Hospital
404 S. 3rd St., Champaign
Chicago Wesley Memorial Hospital
250 E. Superior St., Chicago
Columbus Hospital
2520 Lakeview, Chicago
Cook County School of Nursing
1900 W. Polk St., Chicago
Copley Hospital
Lincoln & Weston, Aurora
Decatur & Macon County Hospital
2300 N. Edward St., Decatur
Katherine Shaw Bethea School
Dixon Public Hospital
403 E. First St., Dixon
Evangelical Hospital
5421 S. Morgan, Chicago
Evanston Hospital
2650 N. Ridge Ave., Evanston
Freeport Memorial Hospital
420 S. Harlem, Freeport
Galesburg Cottage Hospital
674 N. Seminary Ave., Galesburg
Graham Hospital
210 W. Walnut, Canton

Grant Hospital
551 W. Grant Pl., Chicago

Hinsdale Sanitarium and Hospital
120 N. Oak St., Hinsdale

Illinois Masonic Hospital
836 Wellington Ave., Chicago

Lake View Memorial Hospital
812 N. Logan Ave., Danville

Little Company of Mary Hospital
2800 W. 95th St., Evergreen Park

Lutheran General and Deaconess Hospitals
1700 Western, Park Ridge

Lutheran Hospital
555 Sixth St., Moline

Memorial Hospital of Springfield
1st & Miller Sts., Springfield

Mennonite Hospital
804 N. East, Bloomington

Mercy Hospital
1405 W. Park St., Urbana

Methodist Hospital of Central Illinois
221 N. Glen Oak, Peoria

Michael Reese Hospital
29th & Ellis, Chicago

Moline Public Hospital
622 Fifth Ave., Moline

Mt. Sinai Hospital
2730 W. 15th Pl., Chicago

Oak Park Hospital
525 Wisconsin, Oak Park

James W. Thorne School
Passavant Memorial Hospital
303 E. Superior, Chicago

Passavant Memorial Area Hospital
W. Walnut St., Jacksonville

Presbyterian-St. Luke's Hospital
1743 W. Harrison St., Chicago

Provident Hospital
426 E. 51st St., Chicago

Ravenswood Hospital
1931 W. Wilson Ave., Chicago

Rockford Memorial Hospital
2400 Rockton, Rockford

Roseland Community Hospital
45 W. 111th St., Chicago

St. Anne's Hospital
4950 Thomas St., Chicago

St. Anthony de Padua Hospital
2875 W. 19th St., Chicago

St. Anthony's Hospital
1411 E. State St., Rockford

St. Anthony's Hospital
767 - 30th St., Rock Island

St. Bernard's Hospital
6344 S. Harvard, Chicago

St. Charles Hospital
400 New York St., Aurora

St. Elizabeth Hospital
1431 Claremont, Chicago

St. Elizabeth Hospital
600 Sager Ave., Danville

St. Francis Hospital
319 Ridge Ave., Evanston

St. Francis Hospital
211 Greenleaf, Peoria

St. John's Hospital
821 E. Mason St., Springfield

St. Joseph's Hospital
5th & Central, Alton

St. Joseph's Hospital
358 N. Broadway, Joliet

St. Mary's Hospital
145 S. 4th St., Kankakee

St. Mary of Nazareth Hospital
1127 N. Oakley, Chicago

St. Therese Hospital
W. Washington St., Waukegan

Silver Cross Hospital
600 Walnut, Joliet

South Chicago Community Hospital
2320 E. 93rd Pl., Chicago

Swedish-American Hospital
1316 Charles St., Rockford

Swedish Covenant Hospital
5145 N. California, Chicago

Walther Memorial Hospital
1116 N. Kedzie Ave., Chicago

West Suburban Hospital
518 N. Austin Blvd., Oak Park

Practical Nursing Programs

A program leading to a certificate or diploma in practical nursing, organized and operated under public vocational education, hospitals, or other community agencies.

This type of program, usually one year in length, is complete and satisfactory for its own purpose, preparing exclusively for practical nursing.

The curriculum is planned to include nursing theory and practice which is consistent with a short-term program. Courses include such subjects as nursing theory and practice, body structure and function, personal hygiene and community health, nutrition and home management, vocational relationships.

Graduates of programs in practical nursing are prepared for two roles: (1) under the supervision of a registered nurse or physician, they give nursing care to patients in situations relatively free of scientific complexity; (2) in a close working relationship, they assist in giving nursing care to patients in more complex situations.

Practical Nursing Center
Chicago Public Schools
1820 W. Grenshaw, Chicago
Decatur School of Practical Nursing
210 W. North St., Decatur
Dixon State School of Practical Nursing
Dixon
East St. Louis School District 189
240 N. 6th St., East St. Louis
F. W. Olin Vocational School
2200 College Ave., Alton
Hinsdale Sanitarium and Hospital
School of Practical Nursing
120 N. Oak St., Hinsdale
Mattoon School of Practical Nursing
1122 N. 22nd St., Mattoon
McAuley-Mercy School of Practical Nursing
421 N. Lake St., Aurora
Mt. Vernon School of Practical Nursing
7th & Casey, Mt. Vernon
Oak Forest School of Practical Nursing
15900 S. Cicero, Oak Forest
Peoria School of Practical Nursing
509 W. High St., Peoria
Proviso Township School of Practical Nursing
807 S. First Ave., Maywood
Quincy School of Practical Nursing
1200 Maine St., Quincy
Rockford School of Practical Nursing
201 S. Madison, Rockford
St. Francis X. Cabrini School
of Practical Nursing
811 S. Lytle St., Chicago
St. Mary's Hospital School of Practical Nursing
1015 O'Connor St., LaSalle
Southeastern Illinois College
Southern Acres Campus, Carbondale
Springfield School of Practical Nursing
Second and Laurel Aves., Springfield
Waukegan Township School
of Practical Nursing, Waukegan

NOTE: All schools must be approved by the State so that its graduates are eligible for the state licensure examination, and all of the schools listed are so approved. Accreditation by the National League for Nursing or the Joint Commission on Accreditation of Hospitals is not indicated because of the changing state of this approval.

MEDICAL SCHOOLS IN THE STATE OF ILLINOIS

Chicago Medical School
710 S. Wolcott Ave.
Chicago, Ill. 60612
Daniel S. Kushner, M.D., Dean
CA 6-4100

Northwestern University Medical School
303 E. Chicago Ave.
Chicago, Ill. 60611
Richard H. Young, M.D., Dean
649-8649

Stritch School of Medicine—Loyola University
Hines, Ill.
MU 1-5330
921-2610
John F. Sheehan, M.D., Dean
706 S. Wolcott Ave.
Chicago, Ill. 60612
SE 3-8040

University of Chicago School of Medicine
950 E. 59th St.
Chicago, Ill. 60637
H. Stanley Bennett, M.D., Dean
MU 4-6100

University of Illinois College of Medicine
1853 W. Polk St.
Chicago, Ill. 60612
Granville A. Bennett, M.D., Dean
663-7000

APPROVED SCHOOLS FOR MEDICAL RECORD LIBRARIANS

CHICAGO—Grant Hospital
DANVILLE—St. Elizabeth Hospital

APPROVED COURSE IN OCCUPATIONAL THERAPY

CHICAGO—University of Illinois College of Medicine

APPROVED SCHOOL OF PHYSICAL THERAPY

CHICAGO—Northwestern University Medical School

APPROVED SCHOOLS OF X-RAY TECHNOLOGY

ARLINGTON HTS.—Northwest Community Hospital
AURORA—Copley Memorial Hospital
St. Charles Hospital
St. Joseph Mercy Hospital
BLUE ISLAND—St. Francis Hospital
CHICAGO—Alexian Brothers Hospital
Cook County Gradute School of Medicine
Edgewater Hospital
Englewood Hospital
Evangelical Hospital
Franklin Boulevard Community Hospital
Grant Hospital
Illinois Masonic Hospital
Louis A. Weiss Memorial Hospital
Lutheran Deaconess Hospital
Michael Reese Hospital
Mt. Sinai Hospital
Norwegian American Hospital
Presbyterian-St. Luke's Hospital

Provident Hospital
Ravenswood Hospital
St. Anne's Hospital
St. Bernard's Hospital
St. Elizabeth's Hospital
St. Joseph Hospital
St. Mary of Nazareth Hospital
South Chicago Community Hospital
Woodlawn Hospital
DANVILLE—Lake View Memorial Hospital
DECATUR—Decatur and Macon County Hospital
DIXON—Dixon Public Hospital
EAST ST. LOUIS—Centreville Township Hospital
ELMHURST—Memorial Hospital of DuPage County
EVANSTON—St. Francis Hospital
EVERGREEN PARK—Little Company of Mary Hospital
HARVEY—Ingalls Memorial Hospital
HINSDALE—Hinsdale Sanitarium and Hospital
JOLIET—Silver Cross Hospital
KANKAKEE—St. Mary's Hospital
KEWANEE—Kewanee Public Hospital
MOLINE—Moline Public Hospital
OAK PARK—West Suburban Hospital
PARK RIDGE—Lutheran General Hospital
PEORIA—Methodist Hospital of Central Illinois
St. Francis Hospital
QUINCY—Blessing Hospital
ROCKFORD—Rockford Memorial Hospital
St. Anthony Hospital
Swedish-American Hospital
ROCK ISLAND—St. Anthony's Hospital
SPRINGFIELD—Memorial Hospital
St. John's Hospital
URBANA—Carle Memorial Hospital

APPROVED SCHOOLS OF MEDICAL TECHNOLOGY

AURORA—Copley Memorial Hospital
BLOOMINGTON—St. Joseph's Hospital
BLUE ISLAND—St. Francis Hospital
CHAMPAIGN—Burnham City Hospital
CHICAGO—Alexian Brothers Hospital, American Hospital, Augustana Hospital, Chicago Wesley Memorial Hospital, Columbus Hospital, Edgewater Hospital, Evangelical Hospital of Chicago, Grant Hospital of Chicago, Hospital of St. Anthony de Padua, Illinois Masonic Hospital, Michael Reese Hospital, Mount Sinai Hospital, Northwestern University Medical School, Presbyterian-St. Luke's Hospital, St. Anne's Hospital, St. Bernard's Hotel Dieu, St. Joseph Hospital, St. Mary of Nazareth Hospital and Veterans Administration Research Hospital.
CHICAGO HEIGHTS—St. James Hospital
DANVILLE—Lake View Memorial Hospital
DECATUR—Decatur and Macon County Hospital and St. Mary's Hospital
EVANSTON—Evanston Hospital and St. Francis Hospital
EVERGREEN PARK—Little Company of Mary Hospital
FREEPORT—Freeport Memorial Hospital
HARVEY—Ingalls Memorial Hospital
HINSDALE—Hinsdale Sanitarium and Hospital
JOLIET—Silver Cross Hospital
MOLINE—Moline Public Hospital
OAK PARK—West Suburban Hospital
PEORIA—Methodist Hospital, Proctor Community Hospital and St. Francis Hospital
QUINCY—Blessing Hospital and St. Mary's Hospital
ROCKFORD—Rockford Memorial Hospital, St. Anthony Hospital and Swedish American Hospital
ROCK ISLAND—St. Anthony Hospital
SPRINGFIELD—Memorial Hospital and St. John's Hospital
URBANA—Carle Foundation
WAUKEGAN—St. Therese's Hospital

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Illinois Medical Political Action Committee (IMPAC)

The Illinois Medical Political Action Committee (IMPAC) is a voluntary, non-profit, unincorporated, permanent membership organization founded in 1960. IMPAC serves as the unified political action arm of Illinois physicians and others in the healing arts professions. Funds collected through IMPAC memberships, used in support of candidates, are administered independently of other professional groups. However, the program is operated in harmony with the legislative objectives of the Illinois State Medical Society. Individual participation in IMPAC is one means by which the individual physician and his wife can effectively participate in Public Affairs.

IMPAC participates primarily in election contests for legislative offices—both those in the Illinois General Assembly and in the U.S. Congress. It cooperates, both in election efforts and in membership solicitation activities, with the American Medical Political Action Committee (AMPAC), its counterpart on the national level.

IMPAC's organization consists of a chairman, an executive committee, and a council. The

council consists of the members of the executive committee, plus 15 members. Political action activities are implemented by local IMPAC Committees, formed in U.S. Congressional or other legislative districts. Candidate selection and support is determined on the basis of evaluations and recommendations submitted to the council and executive committee by the local committees, thus assuring members of a "grass roots" voice in IMPAC activities.

There are four classes of memberships:

1) *Sustaining*—any physician, dentist, or registered pharmacist, licensed to practice his or her profession in the State of Illinois, and a member in good standing of his professional organization, and his or her spouse may become a Sustaining Member. Combined Sustaining Membership (IMPAC-AMPAC—$199).

2) *Regular*—(Same qualifications as Sustaining). Combined Regular Membership (IMPAC-AMPAC—$35).

3) *Associate Membership*—any person associated with the profession of medical sciences and not qualifying for membership in the sustaining or regular class, may become an Associate Member, upon recommendation of his or her employer, acceptance of application of membership, and payment of dues. (Associate Membership—$5 Minimum).

4) *Resident or Intern Membership*—$10 Minimum.

Additional information about IMPAC may be obtained by writing: IMPAC, 360 N. Michigan Ave., Chicago.

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Illinois Association of the Professions

The Illinois Association of the Professions is a nonprofit corporation, incorporated under the laws of Illinois on Feb. 6, 1964. Several other states such as Michigan, New York and North Carolina have already organized associations of professions with the same basic structure and purpose and an American Association of the Professions has been incorporated.

The IAP was created to provide the organizational machinery whereby the combined strength and counsel of all professions can be utilized for the advancement of professional ideals and the promotion of professional welfare. This should strengthen the traditional rights, privileges and responsibilities of each profession. At the same time, it should also provide more effectively to the people adequate professional services based on skill and integrity.

The close relationships between members of the professions place them in a better position to be "molders of public policy." The IAP will devise ways and means of better utilizing the professional knowledge and skills of its members for the benefit of society and attempt to create the kind of relations between the professions which will most effectively accomplish this objective.

IAP is *not* a political organization. It is nonpartisan. But it serves its members as one practical medium of communication between the professions and legislative bodies.

IAP supplements efforts, programs and services of the individual state professional societies. The professional societies must function for the profession each represents.

The IAP benefits the individual member by helping him protect and perpetuate the individual privileges and responsibilities of the professional person. It serves as a medium of communication between the professions, devoting its activities to professional relations, public relations, legislation, education, and business services.

Seven state professional societies founded the IAP.

Architects Association of Illinois.
Illinois State Dental Society.
Illinois Society of Professional Engineers.
Illinois State Medical Society.
Illinois Pharmaceutical Association.
Illinois State Veterinary Medical Association.
Illinois State Bar Association.

Admission of other professional societies to membership is provided for in the IAP bylaws.

The IAP is governed by a board of directors. On that board *recognition*, rather than *control*, is accorded those professions having larger numbers of individual members. IAP bylaws provide that the board of directors of each state organization shall designate two of its members, who are also members of IAP, to serve as directors. In addition to those thus provided, Directors are also elected from the general membership at the IAP Annual Meeting. ISMS delegates are Dr. George B. Callahan and Dr. Edward A. Piszczek, alternate.

Each IAP member automatically receives a subscription to MONITOR, a quarterly publication of the Association of the Professions. Special reports and studies are disseminated directly to the individual member.

Annual dues for an individual member in IAP is $10. Annual dues for a Professional Society Organization is $100. Applications and checks are accepted by the executive secretary of state professional associations for processing.

IAP is a "horizontal" type of organization established to answer to some of the professional's problems just as other segments of society are organized. Labor, for example, has the AFL-CIO—cutting across all trades on an industry-wide basis was born. State and national Chambers of Commerce were created for business and the American Federation of Farm Bureaus, one of the greatest forces in our nation, is the voice of farming.

WHAT IS IMAA

The Illinois Medical Assistants Association is just what the name implies—an Association of Medical Assistants throughout the State of Illinois who have become an educational organization with objectives as follows: (a) To bring into one association all medical assistant organizations of the State of Illinois; (b) to provide an organization for those residing in Illinois counties where no medical assistants societies are organized; (c) to assist the physicians in improving medical public relations; (d) to maintain and advance the standards of professional employment and to give honest, loyal and efficient service to the medical profession and the public; (e) to meet from time to time to secure interchange of ideas.

The medical assistant associations are educational groups—not social. *We are not a union and any attempt to promote the unionization of this society or its members automatically forfeits the membership of the person or persons making such an attempt.*

For the first time the qualified medical assistant has been given an opportunity to pass a special board examination and thus become a "Certified Medical Assistant." This will affect directly or indirectly every physician's office. Of note is the fact that you do not have to belong to the Association to take this examination. For further information as to qualifications necessary to take the examination write to American Association of Medical Assistants, 510 North Dearborn Street, Chicago 10, Illinois.

Local programs in the component societies of IMAA are geared to the needs of that particular area. Obviously the strictly specialist areas would have entirely different problems and educational needs than the area of the general practitioner where the office is staffed by one or two medical assistants. Hence the educational programs in your area would be decided by your own Medical Assistants and supervised by the doctors in your own county society.

We need you, Doctor, to encourage your medical assistants to join our association. But also you could help us by assisting us in selecting the proper educational programs which in the long run would be of most benefit to you. That is our whole purpose, to become better medical assistants so we can help you to help your patients.

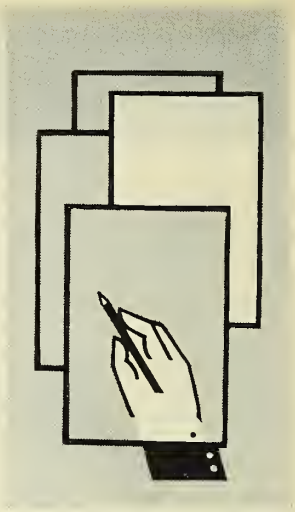
The Educational & Scientific Foundation

The Educational & Scientific Foundation was founded to provide an administrative agency to foster the advancement of medical science through:

1) The initiation of scientific and medical research activities.

2) The collection, evaluation and dissemination of the results of research activities to the public.

3) The implementation and management of projects related to medicine for individuals or organizations seeking to inform or educate others, or to improve their own knowledge.



Medical-Legal Information

Legal Services of ISMS

The Illinois State Medical Society retains a general counsel and occasionally uses the services of special counsel in implementing its various programs. Legal advice is given to the state society and its components as organizations, but is not generally available to individual members.

Exception is made, however, when an individual's personal problem involves his relationship with a county medical society or affects the entire organization. In such cases, it is suggested that the individual member receive approval of his county society to forward inquiry to headquarters of the state society. Legal opinion on the problem will then be made available to the county society upon request from its officers.

Although the Society and its counsel cannot provide personal advice to ISMS members, it is to every physician's advantage to acquaint himself with as much medical-legal knowledge as possible. The following section, therefore, is devoted to this kind of information.



HOW TO SET YOUR AFFAIRS IN ORDER

A physician's death, expected or not, often creates burdensome tasks for survivors. Natural grief is complicated by the necessity for rapid decisions and hurried searches for required information. Significant papers may be so well put away that prolonged seeking in various places may be required, with added pain for the bereaved.

It is therefore suggested that the physician, during his lifetime, ease the situation by compiling in one place needed information about the location of important records and papers. In addition, the Illinois State Medical Society urges each member to have a will prepared by a competent attorney. The executor named in the will can handle the doctor's estate most efficiently if he has access to specific information.

The physician should, of course, leave information about insurance, real estate, and bank accounts just as everyone else does, but he has additional responsibilities peculiar to his profession. He should leave instructions for:

1. Temporary coverage of his practice. Some arrangement with a colleague should be made immediately for hospitalized patients and others should be notified of the doctor's death.

2. Patient records, which should be carefully preserved for a minimum of 10 years and for 25 years, if possible. Contents of the records should be turned over to another physician upon written request.

3. Return of unused narcotics to the Treasury Department, the narcotics tax stamp and order book to the Internal Revenue Service, and retention of the narcotics ledger for two years.

4. Disposal of his practice. If it is to be sold, rapid action is advised as value is lost quickly. Equipment is best disposed of with the sale of the practice.

5. Benefits that may be due survivors from unused insurance premiums, Blue Cross-Blue Shield, Veterans Administration, or Social Security.

LEGAL LIABILITY OF PHYSICIANS

The legal liability of physicians is a question on which much has been written. It has also been the topic of discussion at many meetings of medical and medical-legal groups. However, because of the grave nature of the problem, the Illinois State Medical Society's legal counsel believes that the subject cannot be overemphasized.

Statistics prove that the number of malpractice and general liability suits against physicians is on the increase. This does not mean that physicians are becoming less skillful or more careless in their diagnosis and treatment; it probably means that physicians are being affected by the tremendous growth there has been recently in all types of personal injury litigation.

More people than ever before are receiving medical attention and more are starting lawsuits against physicians when recovery is less than complete.

Liability Insurance

For this reason, it is essential that every physician carry liability insurance to protect him against all possible claims. The physician should be aware, however, that there are some inadequate policies on the market today and an attorney should be consulted before contracting for insurance that may not cover the doctor's particular circumstance. Additional coverage insofar as limits are concerned is relatively inexpensive and should be carried in sufficient amount to cover all possibilities.

A physician today is a "sitting duck" for a lawsuit even though he may in no way be guilty of negligence. And lawsuits to defend, no matter how meritorious, require the expenditure of time and money.

Legal implications in this field are wide, but basically the physician is liable for his own negligent acts and the negligent acts of all his employees. In the case of a partnership, he is also liable for the negligent acts of his partners.

While the right kind of insurance in sufficient amount will protect the physician financially, steps should be taken by all doctors to help minimize the filing of lawsuits of this kind and to work for reduction in the number of guilty verdicts being obtained.

The American Medical Association has prepared, and has available for distribution, several interesting pamphlets and papers on this subject. The pamphlet entitled, "Professional Liability and the Physician," reprinted from the February 1963 issue of the Journal of the American Medical Association, contains this statement:

Physician's Responsibility

"In the final analysis, the physician himself must share the responsibility for the continuing existence of the unpleasant professional liability situation. Many physicians have been satisfied to pay their professional liability insurance premiums and thereafter to sit back complacently, doing nothing until they become a target. Every physician must be brought to realize that this money payment is only part of his insurance program; a much more important part is his contribution of time, study, and attention to put into effect all possible measures to safeguard the patient, himself, and his colleagues. Professional liability is in no sense merely an insurance problem—it is a medical problem and must be combated by members of the medical profession."

The AMA pamphlet goes on to say that "prevention is the best possible defense against claims and suits" and lists these 21 prevention "commandments":

1. The physician must care for every patient with scrupulous attention given to the require-

ments of good medical practice.

2. The physician must know and exercise his legal duty to the patient.

3. The physician must avoid destructive and unethical criticism of the work of other physicians.

4. The physician must keep records which clearly show what was done and when it was done, which clearly indicate that nothing was neglected, and which demonstrate that the care given met fully the standards demanded by the law. If any patient discontinues treatment before he should, or fails to follow instructions, the records should show it; a good method is to preserve a carbon copy of the physician's letter advising the patient against the unwise course.

5. The physician must avoid making any statement which constitutes, or might be construed as constituting an admission of fault on his part. He should instruct employees to make no such statements.

6. The physician must exercise tact as well as professional ability in handling his patients, and should insist on a professional consultation if the patient is not doing well, if the patient is unhappy and complaining, or if the family's attitude indicates dissatisfaction.

7. The physician must refrain from over-optimistic prognoses.

8. The physician must advise his patients of any intended absences from practice and recommend, or make available, a qualified substitute. The patient must not be abandoned.

9. The physician must unfailingly secure an "informed" consent (preferably in writing) for medical and surgical procedures and for autopsy.

10. The physician must carefully select and supervise assistants and employees and take great care in delegating duties to them.

11. The physician must keep abreast of general medical and scientific progress.

12. The physician should limit his practice to those fields which are well within his qualifications.

13. The physician must frequently check the condition of his equipment and make use of every available safety installation.

14. The physician should make every effort to reach an understanding with his patient in the matter of fees, preferably in advance of treatment.

15. The physician must realize that it is dangerous to diagnose or prescribe by telephone.

16. The physician should not sterilize a patient solely for the patient's convenience except after a reasonably complete explanation of the procedure and its risks and possible complications and after obtaining a signed consent from the patient and from the patient's spouse if the patient is married. Such sterilization is a crime in Connecticut, Kansas, and Utah and should not be performed in those states. Eugenic sterilization should be performed only in conformity with the law of the state, if any. Sterilization for therapeutic purposes may lawfully be performed with the informed consent of the patient and preferably with the informed consent of the patient's spouse, if the patient is married.

17. Except in an actual emergency situation which makes it impossible to avoid doing so, a male physician should not examine a female patient unless an assistant or nurse, or a member of the patient's family is present.

18. The physician should exhaust all reasonable methods of securing diagnosis before embarking upon a therapeutic course.

19. The physician should use conservative and less dangerous methods of diagnosis and treatment wherever possible, in preference to highly toxic agents or dangerous surgical procedures.

20. The physician should read the manufacturer's brochure accompanying a toxic agent to be used for diagnostic or therapeutic purposes, and, in addition, should ascertain the customary dosage or usage in his area.

21. The physician should be aware of all the known toxic reactions to any drug he uses, together with the proper methods for treating such reactions.

Physician and Hospital Liens

Paragraph 101.1 of Chapter 97, Illinois Revised Statutes 1963, provides that every licensed physician practicing in the State of Illinois who renders service to an injured person, except services rendered under the provisions of the Workmen's Compensation Act, shall have a lien upon all claims and causes of action for the amount of his reasonable charges up to one-third of the sum recovered by the injured person. In order to effectuate this lien, notice in writing must be given to the injured person and also to the person or persons against whom such claim or right of action exists.

Under paragraph 97 of Chapter 82, Illinois Revised Statutes 1963, not-for-profit hospitals and those hospitals maintained by a county shall have a lien on all claims or causes of action for the amount of reasonable charges at ward rates up to one-third of the amount recovered. Again, in order to perfect the lien, it must be filed in the same manner as the physician's lien described above.

While the language is substantially the same under both liens, they are entirely separate enactments, neither is subservient to the other and, therefore, both the hospitals and the physicians can recover up to one-third of the amount received by the patient.

Admissibility in Evidence of Deliberations of Tissue Committees

In 1961 the Illinois legislature passed an act in which one of the purposes was to prevent the admissibility in evidence and making public the

deliberations and findings of tissue committees. The act is set out at paragraphs 101-105 of Chapter 51, Illinois Revised Statutes 1963, and is as follows:

"101. All information, interviews, reports, statements, memoranda or other data of the Illinois Department of Public Health, Illinois State Medical Society, allied medical societies, or in-hospital staff committees of accredited hospitals, but not the original medical records pertaining to the patient, used in the course of medical study of the purpose of reducing morbidity or mortality shall be strictly confidential and shall be used only for medical research.

102. Such information, records, reports, statements, notes, memoranda, or other data, shall not be admissible as evidence in any action of any kind in any court or before any tribunal, board, agency or person.

103. The furnishing of such information in the course of a research project to the Illinois Department of Public Health, Illinois State Medical Society, allied medical societies, or to in-hospital staff committees or their authorized representatives, shall not subject any person, hospital, sanitarium, nursing or rest home or any such agency to any action for damages or other relief.

104. No patient, patient's relatives, or patient's friends named in any medical study, shall be interviewed for the purpose of such study, unless consent of the attending physician and surgeon is first obtained.

105. The disclosure of any information, records, reports, statements, notes, memoranda or other data obtained in any such medical study except that necessary for the purpose of the specific study is unlawful, and any person convicted of violating any of the provisions of this Act is guilty of a misdemeanor."

While there have been no decisions under the act quoted by any of the Illinois appellate courts or the Supreme Court, it would appear that a tissue committee would come within the meaning of "in-hospital staff committees of accredited hospitals," and, therefore, would be inadmissible in evidence and considered private and confidential. Unfortunately, the act does not define accredited hospitals, but this would probably mean either licensed hospitals or those accredited by the medical professions. (There are only 10 licensed hospitals in Illinois which have not been accredited by the medical professions.)

In addition to the above statute, the fact that tissue committees are not required by Illinois law, but are established through the voluntary co-operation of the hospitals and the medical profession for the betterment of medicine through research of prior cases, would be a powerful argument against admissibility.

Another legal argument against the introduction in evidence of such records would be the fact that the results would be the deliberations of a committee and there would be no way to cross-examine a committee, which would mean that a fundamental right was being lost by one one or more of the litigants in the case.

As stated above, there are no decisions in Illinois which can be relied upon, but it is the opinion of the ISMS general counsel that such records cannot legally be used in any legal action.

It should be pointed out that in most instances subpoenas and subpoenas duces tecum (produce the records) are issued by the clerk of the court on application of one of the parties litigants and no determination is made as to the admissibility of the testimony or records until the witnesses and records are produced in court. It is suggested that if a subpoena or court order is ever received involving the records and deliberations of the tissue committee, your attorney be immediately contacted in order to file appropriate motions to suppress the production of the records. If the trial court should hold that such records are admissible, it is then suggested that an appeal be made to the Supreme Court of Illinois on this question, for if such records are produced, it could conceivably have the result of diminishing the efficiency or the ultimate abandonment of such committees, with the result that research and advancement in the art of medicine would be retarded.

Consent by Minors to Medical Treatment and Operations

The general law in Illinois is that a minor cannot give legal consent or waive any rights which he has under the law. In the year 1961, the Illinois legislature made an exception to this rule by specifically providing that consent to the performance of medical or surgical treatment by a licensed physician could be executed by a married person who is a minor or a pregnant woman who is a minor and shall not be voidable because of such minority. This act further provides that any parent who is a minor many consent to the performance upon his or her child of medical or surgical procedures by a licensed physician and that the consent shall not be voidable because of such minority.

The act referred to above is set out at paragraphs 18.1 and 18.2 of Chapter 91, Illinois Revised Stautes 1963.

Employment Contract Between Physician and Patient

The relationship between a physician and a patient is one of contractual relationship and, therefore, a physician is under no legal requirement to accept anyone as a patient unless he so desires. This rule is true in the case of an emergency even though no other physician is available.

Legally, a physician has the right to refuse

treatment in the case of an accident or other emergency and could not in any way be held liable for refusing to administer aid. (This is strictly the legal answer and does not involve the moral or ethical question.) The rendering of such services as may be necessary in the case of an emergncy does not of itself give rise to the relationship of physician and patient and the physician is under no obligation to continue treatment beyond the emergency.

The physician in rendering emergency treatment, however, must use the same degree of skill and care, as required in other cases, taking into consideration conditions at the scene of the accident.

Continuation of Treatment

A physician or surgeon, on undertaking an operation or treatment, is under the duty, in the absence of an agreement limiting the service, of continuing his attendance, after the operation or first treatments, as long as the case requires attention; and a surgeon, in his treatment subsequent to an operation, is required to exercise reasonable and ordinary skill and care.

The failure to give needed continued care under an obligation to do so constitutes negligence or malpractice. The obligation of continuing attention can be terminated only by the cessation of the necessity which gave rise to the relationship of physician and patient, by mutual consent of the parties, by the discharge of the physician by the patient, or by the physician's withdrawing from the case after giving the patient reasonable notice so as to enable him to secure other medical attendance.

A physician has the legal right to withdraw from a case if the patient breaks the contract by failure to follow the medical advice or treatment and direction of the physician, but the relationship cannot be terminated until the physician has advised the patient of his withdrawal from the case and has allowed the patient a reasonable length of time to procure another doctor.

Written Notice

What is reasonable notice to the patient depends upon the circumstances of each case. Factors which must be taken into consideration are the condition of the patient, the size of the community, and the availability of other physicians. In order to be completely safe, prior to withdrawal from the case, the physician should advise the patient in writing of his intent to withdraw, his reasons therefor, and the fact that he will make available the patient's case history and information regarding diagnosis and treatment to the new physician when selected by the patient. Should the patient return to the original physician stating that he has been unable to procure other medical aid, treatment should not be refused until a replacement has been obtained.

A physician has the right to leave his practice temporarily if he makes provisions for the attendance of competent physician during his absence. This notice, which again preferably should be in writing, should be in sufficient time so that the patients can obtain replacements of their own choice if they do not desire to consult the physician temporarily handling the practice of the absent physician.

CONSUMER FRAUD ACT

This act is designed to protect the consumer. In part it reads,—"The act, use or employment by any person of any deception, fraud, false pretense, false promise, misrepresentation, or the concealment, suppression, or omission of any material fact with intent that others rely upon such concealment, suppression or omission, in connection with the sale or advertisement of any merchandise, whether or not any person has in fact been misled, deceived or damaged thereby, is declared to be an unlawful practice." The term merchandise includes any objects, wares, goods, commodities, intangibles, real estate, or services.

COMMITMENT OF PATIENTS TO MENTAL HOSPITALS

The State of Illinois has adopted an entirely new Mental Health Act which went into effect July 1, 1964, which Act is set out under Chapter 91½, Illinois Revised Statutes 1963.

Under the provisions of this Act, there are six ways in which an individual may be admitted to a mental hospital:

1. Informal admission
2. Voluntary application for admission
3. Admission on certificate of one physician
4. Admission on certificate of two physicians
5. Hospitalization upon court order
6. Emergency admission, detention

Informal admission:

Anyone desiring admission to a mental hospital, other than a licensed private hospital, may be admitted without making formal application if, after examination, the superintendent of such hospital feels such person in need of care and treatment. Any such patient shall be free to leave at any time after admission.

Voluntary application for admission:

Any person who is in need of mental treatment or is alleged to be in need of mental treatment may be admitted to a mental hospital if, in the judgment of the superintendent, such person is a proper subject for voluntary admission after a verified application has been filed, with the application being presented by the person himself or his attorney, or if a minor, by his parent or guardian. Upon this type of admission, the patient has the right to leave the hospital 15 days after having given notice in writing of his desire to leave and upon admission the patient shall be advised both orally and in writing of this right of release.

Admission on certificate of one physician:

The superintendent of a mental hospital may receive and detain as a patient any person alleged to be in need of mental treatment who does not object thereto upon the application signed by a relative of the patient or peace or health officer or an officer of any charitable or welfare institution or by a friend of the patient together with the certificate of one examining physician executed within 10 days prior to such admission. Prior to admission the superintendent of the mental hospital shall cause the patient to be again examined in order to confirm the need for hospitalization. If the hospital determines within 15 days after admission that the patient should be detained for further care and treatment and the patient does not agree to remain in the hospital as a voluntary patient, the certificate of another examining physician supporting the application is required.

Admission on certificate of two physicians:

The same general procedure is followed here as in the case of admission on certificate of one physician, except that the consent of the patient is not required, but within five days after his admission he shall consult at the hospital with a magistrate or other judicial officer, at which time he shall be advised of his right to hearing, at which hearing he may be represented by counsel and present evidence.

Hospitalization upon court order:

Whenever any person shall be, or supposed to be, in need of mental treatment, any reputable citizen of this state may file in the Circuit Court the verified petition alleging that the individual is in need of mental treatment and that he be admitted to, and confined to, a hospital for the mentally ill. Upon the filing of the petition the Court shall have power to make necessary temporary orders of restraint and a hearing shall be had after an examination has been made by a physician or psychologist appointed by the court. At the hearing the patient may be represented by counsel and has the right to a trial by a jury of six. When the patient demands a jury, one of the six members shall be a physician or a psychologist.

Emergency admission, detention:

Whenever a petition is filed in the Circuit Court by a reputable citizen alleging that the condition of an individual is such that immediate restraint is necessary, which petition is accompanied by a certificate of a physician, the individual may be confined in a mental hospital for a period not exceeding 15 days.

This new Mental Health Act appears to contain adequate provisions for the confinement of mental cases but also provides sufficient safeguards so that an individual cannot be wrongfully restrained for an undue period of time.

The State's Attorney of each county is charged with the responsibility of the enforcement and operation of this Act and this is the office which should be contacted by the physician when dealing with mental patients.

INTERNAL REVENUE CODE

It should be evident to the busy physician that it is just as unwise for him to be his own tax consultant as it is for every man to be his own doctor. The physician is well aware that in seeking to keep abreast of all of the ramifications and developments of modern medicine, he has a burden that is becoming increasingly difficult to sustain and that he has very little time to devote to subjects as complex as taxation, which is rightfully the province of his accountant and lawyer.

Taxation in the United States is complex and many tax matters have no particular application to the medical profession as such. However, the doctor as a citizen should be aware that he is greatly affected by a subject so varied and so complicated that the statutes themselves require some 1,500 pages to be set forth. And he should know that sections 1(a) through 8023(b) are printed in a size of type that should be of some benefit in fees to practitioners who concern themselves with the human eye. Surely the point that physicians are well advised to place their problems with accounting and legal advisors is further exemplified by such facts as the following:

Regulations implementing the Internal Revenue Act require some 9,700 pages for them to be spelled out and that, in order to designate the different regulations, the government needs to entitle the regulations as Regulation Section 1.0-1 through Regulation Section 301.770-11.

Just as the patient would be so much better served if he saw his doctor regularly before difficulties become advanced, so the physician's interests would be better served if he would seek advice on income and estate tax problems before the fact, rather than after problems have arisen.

PROCEDURES AND REPORTS IN CONTROL OF NARCOTIC DRUGS

Physicians are subject to control by both the state of Illinois and the federal government in relation to narcotic drugs. The numerous provisions of the federal regulations are set forth in a fairly lengthy pamphlet entitled, "Regulations No. 5 Relating to the Importation, Manufacture, Production, Sale, etc., of Opium, Coca Leaves, Isonipecaine or Opiates," which was reprinted Apr. 1, 1957, and is available at a cost of 45 cents through the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. This is published by the Bureau of Narcotics of the U. S. Treasury Department.

The state of Illinois' "Uniform Narcotic Drug

Act" has been in effect since Jan. 1, 1958. It is found in paragraphs 22-1 through 22-49, inclusive, Chapter 38 of Illinois Revised Statutes, 1963. The Division of Narcotic Control's current rules and regulations to implement the Act have been in effect since Apr. 1, 1960. They cover such matters as prescriptions and official forms therefor, emergencies excusing use of other than official prescription forms, reporting of loss or theft of such prescription blanks, records to be kept by the physician, dispensing of hypodermic syringes and needles, prescribing procedures in hospitals, and other subjects related to narcotic drugs. The Act and the rules and regulations are available at no cost through the Division of Narcotic Control, 623 E. Adams St., Springfield.

Further, the state of Illinois has had in effect since Jan. 1, 1960, a "Uniform Drug, Device and Cosmetic Act." Its rules and regulations control such things as the keeping of adequate records, for a period of two years, of all purchases and dispositions of dangerous drugs as such drugs are defined by the Act. A publication containing the Act and the pursuant rules and regulations is also available through the Division of Narcotic Control in Springfield.

All physicians are urged to have in their possession copies of both the state and federal narcotics control acts and the rules and regulations implementing them. As these laws and regulations are changed from time to time, every effort should be made to have the current rules handy.

PROCEDURES AND REPORTS AS TO COMMUNICABLE DISEASES

In order to be conversant with the presently governing rules and regulations as to the control of communicable diseases and the physician's duties as to reports and procedures in relation to these afflictions, it is suggested that the physician apply to the Department of Public Health of the State of Illinois at Room 500, State Office Building, Springfield, for the publication entitled, "Rules and Regulations for the Control of Communicable Diseases," which was revised as July 1, 1959.

HOW TO WILL YOUR BODY OR ANY PORTION THEREOF TO SCIENCE

The law in the State of Illinois as to the right of an individual to leave his body or particular parts thereof to science by will or agreement is not at all clear. While there are instances of medical science receiving dead bodies or parts thereof under provisions in wills and agreements made prior to death, such disposition has never been passed upon by the Illinois courts of last resort. There is no statutory authority in Illinois specifically providing for such disposition and it is the feeling of the ISMS general counsel that a bill specifically authorizing this procedure should be presented to the next session of the General Assembly.

Illinois does have an Act covering deceased bodies which are to be buried at public expense. These bodies may, under certain conditions, be used for advancement of medical science. The Act is set forth in paragraph 19, Chapter 91, Illinois Revised Statutes 1963, and is as follows:

"Superintendents of penitentiaries, houses of correction and bridewells, hospitals, state charitable institutions and county homes, coroners, sheriffs, jailors, city and county undertakers and all other state, county, town and city officers, in whose custody the body of any deceased person, required to be buried at public expense, is, shall, in the absence of disposition of such body, or any part thereof by will or other written instrument, give permission to any physician or surgeon licensed in Illinois, or to any medical college or school, public or private, of any city, town or county, upon his or their request therefor, to receive and remove free of charge or expense, after having giving proper notice to relatives or guardians of the deceased, the bodies of such deceased persons to be buried at public expense, to be by him or them used within the state, for advancement of medical science. Preference shall be given to medical colleges or schools, public or private and such bodies to be distributed to and among the same, equitably, the number assigned to each, being in proportion to the students of each college or school: except, if any person claiming to be, and satisfying the proper authorities that he is of kindred of the deceased asks to have the body for burial, it shall, in the absence of disposition of such body, or any part thereof by will or other written instrument, be surrendered for interment. Any medical college or school, public and private, or any officers of the same, that receive the bodies of deceased persons for the purposes of scientific study, under the provisions of this Act, shall furnish the same to students of medicine and surgery, who are under their instruction, at a price not exceeding the sum of $5.00 for each and every such deceased body so furnished."

It should be noted that in the above law it is provided that disposition shall be made only in case the deceased has not specifically made disposition by his will or other written instrument. This would tend to support an argument that the deceased does have the right to dispose of his body as he sees fit, but to make it completely clear a new act specifically giving this power should, if possible, be adopted by the legislature.

The rather recent discovery that certain parts may be removed from a dead body and used in a living person has greatly increased the need for cadavers and parts thereof. Any one wishing to make a donation should so provide by his will and notify the institution to receive the body, or any part thereof, of this provision in his will and also notify the executor of the will and his

next of kin, or whoever is the most likely to be notified immediately of his death, for time is of the essence in the case of transplants.

Additional information on this subject may be obtained from A.M.A.

AUTOPSY

In Illinois, the heirs and next of kin can bring an action for mutilation of the body in those cases where an autopsy is performed without authority or permission. In order to avoid the possibility of liability, autopsies should only be performed, in Illinois, when ordered by the coroner or upon written consent given by the next of kin.

THE MEDICAL WITNESS

It is difficult to find a field of law in which expert evidence is of greater importance than the testimony of the physician in accident cases. The carnage and mutilation on highways alone results in many thousands of lawsuits a year and the busy physician finds that attending court is a burden that often cannot be avoided.

There may be hope that the growing use of depositions will reduce some of the load from both physicians and attorneys as disclosure of evidence through deposition is likely to result in settlement before a case is brought to trial. Nevertheless, all signs indicate that the average practitioner can expect an increase in the number of times he will be called upon as an expert witness in the coming years.

It is suggested that, if the physician wishes to better prepare himself as to medical jurisprudence, there are a number of sources which can give him an insight into what he may expect in the forum and give him greater confidence as to this aspect of his practice. Such sources, without even the suggestion that the following begin to exhaust a listing, are:

1. Doctor and Patient and the Law, by Attorney C. Joseph Stetler and Alan R. Moritz, M.D., Director of the Institute of Pathology at Western Reserve University, Fourth Edition, published in 1962 by The C. V. Mosby Company of St. Louis.

2. Chapter III on Evidence in Law in Medical and Dental Practice by Lott and Gray, published in 1942 by The Foundation Press of Chicago.

3. Medical Trial Technique by Attorney Irving Goldstein and Willard Shabat, M.D., published in 1942 by Callaghan and Company of Chicago.

4. Lawyers Medical Cyclopedia of Personal Injuries and Allied Specialities, which consists of seven volumes and is an elaborate treatment of the subject; published in 1962 by The Allen Smith Company of Indianapolis.

5. The Rights and Rewards of the Medical Witness by Nordstrom, published in 1962 by Thomas Publishing Company of Springfield.

INTERPROFESSIONAL CODE FOR PHYSICIANS AND LAWYERS OF ILLINOIS

The following Interprofessional Code for Physicians and Lawyers of Illinois was drafted by a Special Committee on Medical-Legal Cooperation of the Illinois State Bar Association and the Liaison Committee of the Illinois State Medical Society to serve as a guide to physicians and lawyers. It has been approved by the governing boards of both the Illinois State Bar Association and the Illinois State Medical Society.

PREAMBLE

The purposes of this Code are to establish standards of practice and of ethical conduct for physicians and lawyers in those areas in civil cases where there is and will continue to be an interrelationship of medicine and law, and thereby to improve the practical working relationships of the two professions, to protect the legitimate interests and the rights of the patient-client, of the physician, the lawyer, and of society, and thereby to help advance the more effective administration of justice.

The provisions of the Code constitute recognition that the members of each profession have an obligation not only to the individual who obtains their advice and assistance but also to the community and society as a whole, and to all other members of their own professions. The objectives of the Code can be achieved only if the members of both professions acquaint themselves with these standards of practice and follow them, subject to rules of law and principles of medical and legal ethics.

ARTICLE I

Attending Physician's Medical Reports and Conferences

Purpose of Physician's Report

1. Information relative to an attending physician's treatment of a patient whose physical or mental condition is an issue in litigation is of prime importance to the parties involved in litigation. To properly prepare his client's case for trial and to be in a position to properly represent his client in settlement negotiations, the patient's lawyer has the duty of acquiring pertinent information from the attending physician. During the course of litigation, it becomes necessary for the lawyer to correspond with and confer with his client's physician and to obtain written reports from the physician.

Keep Complete Records

2. The attending physician should prepare, keep and preserve full and complete records of his examination, diagnostic findings (laboratory), and treatment of the patient.

Request for Report

3. When a medical report is desired by the lawyer, he should make a written request for it

from the attending physician, and this request should be accompanied by a written authorization from the client for the release of the information sought from the client's physician. The request should ask the physician to give the following specific information:

(a) History of the occurrence leading to the injury or condition, as given by the patient to the physician.
(b) Pertinent subjective complaints elicited from the patient.
(c) Pertinent objective findings made by the physician throughout the course of treatment.
(d) The physician's diagnosis.
(e) Interpretation of x-rays, electroencephalograms, electromyograms, and any and all other pertinent data used in the treatment and diagnosis (source and interpretation should be stated).
(f) Treatment rendered by the physician to the patient.
(g) The physician's opinion as to whether there is permanent residual from the injury or condition and the extent thereof.
(h) The prognosis.
(i) The physician's opinion as to the necessity of further medical or surgical treatment.

The request for a report should be accompanied by a statement that the lawyer will endeavor to provide for the payment of the physician's fees out of any settlement or satisfaction of judgment.

The Physician's Report

4. The physician has the obligation to cooperate with his patient's lawyer and should as soon as practicable after receiving the request for it supply the patient's lawyer with a written report. This report should be clear and concise and should contain specific responses to the elements enumerated in the lawyer's request for a report. In preparing the report, the physician should examine his own records and where practicable, the records of any hospital he deems necessary pertaining to the treatment of the patient.

The attending physician should not give written or oral reports concerning his patient to attorneys, adjusters, or investigators representing parties whose interests are adverse to those of the patient without express written authorization from the patient.

Report Should Be Complete

5. The report to the lawyer should be objective impartial and complete. The attending physician should not give, and should not be asked to give a report that does not comply with these standards.

Conference Between Physician and Lawyer

6. Prior to the submission of a medical report by the attending physician to the patient's lawyer, conferences may be required between the patient's physician and lawyer. Conferences at the request of either the physician or the lawyer should be arranged at the mutual convenience of each. At the conference there should be candid discussion of the medical aspects of the litigation to promote complete understanding between the patient's physician and lawyer.

ARTICLE II

Examining Physician's Medical Reports

The "examining physician," as the term is used in the Code, differs from the "attending physician" and the "expert" in that he does not prescribe treatment and is not necessarily expected to testify at the trial. His examination is made at the request of the lawyer for one or both of the parties or at the request of the court. Should he later testify at the trial he testifies as an expert.

Request for Examination and Report

1. Where the examination is made at the behest of either party, a written request for examination should be sent to the physician by the lawyer asking for the examination stating the nature of the examination desired.

The request should be specific and request the physician to give the following information:

(a) Pertinent subjective complaints elicited from the patient.
(b) Pertinent objective findings made by the physician.
(c) The physician's diagnosis as of the time of the examination.
(d) Interpretation of x-rays, electroencephalograms, electromyograms and any and all other pertinent data used in the diagnosis (source of interpretation should be stated).
(e) The physician's opinion as to whether there is a permanent residual from the injury, and the extent thereof.
(f) The prognosis.
(g) The physician's opinion as to the necessity of further medical or surgical treatment.

Report of Examination

2. The examining physician should send the report of the examination to the lawyer requesting the examination as soon as practicable after the examination. The report should be clear and concise and should contain specific responses to the elements enumerated in the lawyer's request.

Report is Confidential

3. The examining physician shall not give medical information to the opposing lawyer without the authorization of the lawyer who requested the examination, unless the examination is pursuant to order of court.

Keep Complete Records

4. The examining physician should prepare, keep and preserve full and complete records of his examination and diagnostic findings (laboratory).

Report Should Be Complete

5. The report to the lawyer should be objective, impartial, and complete. The examining physician should not give, and should not be asked to give a report that does not comply with these standards.

Examination at the Request of the Court

6. Provisions for examination at the request of the court, and the procedure to be followed, are covered by rule of court or by statute.

Copy of Report to Employee in Workmen's Compensation Cases

7. In Workmen's Compensation cases, the examining physician selected by the employer is required to deliver a copy of his report to the injured employee or his lawyer, unless the employee has a physician of his own selection present during the examination.

ARTICLE III
Medical Fees

Attending Physician

(1) The attending physician of a patient whose physical or mental condition is the subject matter in litigation may, in the manner provided by the Statutes of the State of Illinois, perfect his lien for medical fees for his services rendered to the patient. (See Appendix for suggested form of lien notice.)

(2) The physician should also notify the lawyer for the patient of his lien by sending him a copy of the Notice of Lien.

(3) The lawyer for the patient should explain to his client the nature of the lien and necessity for satisfying it out of any recovery. The lawyer should take all reasonable steps to assure payment for the physician's services out of any recovery made for the client. If the lawyer finds that he cannot accomplish this, he should notify the physician immediately so that he may take steps to enforce his lien. (See Appendix for suggested form of authorization to be used by lawyer.)

(4) In the event that the attending physician expends time in preparing a report, in appearing at a deposition or in court, or in any other manner for his patient, the physician shall be entitled to a reasonable fee from his patient. The lawyer shall take all reasonable steps to see that his client pays the said fee.

(5) The attending physician shall not charge his patient a higher fee because the patient may recover the amount of these charges as the result of a claim or litigation.

(6) The lawyer should not pay the attending physician's fee except with the client's funds.

(7) The physician's fee shall not be contingent upon the outcome of the litigation.

Examining Physician

(1) A physician who makes an examination at the request of a lawyer shall charge the reasonable value of his services so rendered on the same basis as if his services were not rendered to a patient in connection with litigation. The physician's charge for reports, conferences with the lawyer, and appearances at depositions and in court shall also be based upon the reasonable value of those services.

(2) The said charges shall be the obligation of the client and not of his lawyer. The lawyer shall make every reasonable effort to see to it that his client pays the fee of the examining physician for all services rendered by the physician to or in behalf of said patient.

(3) The examining physician's fee shall not be contingent upon the outcome of the litigation.

Experts

(1) The physician whose services may be rendered as an expert in connection with any phase of litigation, shall not charge more than the reasonable value of his services. The fee shall be the obligation of the patient-client and not of his lawyer.

(2) The lawyer shall make every reasonable effort to see that his client pays the fee of the expert.

(3) The expert's fee shall not be contingent upon the outcome of the litigation.

ARTICLE IV
The Physician at the Trial or Hearing on Deposition

Conferences Prior to Trial

(1) The lawyer and the physician should arrange to confer with each other before the physician testifies at any hearing, and if possible, before the trial commences. At the conference the common problems involved in the case should be discussed. The lawyer has the responsibility of acquainting the physician with any particular legal problems which might involve the physician, and with the assistance of the physician should determine the areas in which the physician will be called to testify. The lawyer should familiarize the physician with the contents of any proposed hypothetical questions.

(2) The physician should make every effort to cooperate with the lawyer in regard to this conference. Each should be mindful of the demands on the other's time in making appointments for conferences, in the time spent on conferences, and in notifying the other promptly if, for any reason, either is unable to attend the appointed conference. While the physician should recognize that he is not an advocate and the lawyer is, he should at the conference familiarize the lawyer with the medical problems involved, the areas in which he (the physician) feels qualified to testify, and the facts and opinions about which he is prepared to testify.

Court Arrangements

(1) The lawyer should make every effort to be economical in his use of the physician's time. He should give the physician reasonable advance notice of when and how long he shall be needed in court, advise the physician promptly of any changes in the time of his needed appearance, and should call the physician as a witness upon his arrival at court, with as little delay as possible.

(2) The physician has an obligation to be in court at the time requested. He should recognize that only a true emergency will excuse his nonattendance. In the event that such an emergency does arise, he should, as soon as possible, notify the lawyer who requested his appearance in court of his inability to be in court at the appointed time and also advise as to the earliest time he will be available to testify.

Subpoenas

(1) The lawyer should determine whether or not the physician should be served with a subpoena. If the physician is to be served with a subpoena, the lawyer should advise the physician of the reason for serving him; for example, that service of a subpoena is necessary to lay the foundation for a continuance if the physician is unable to attend the trial due to an emergency or other cause. If service of a subpeona is to be had, the lawyer should advise the physician in advance, and if possible, arrange for the service of the subpoena at a time and place satisfactory to the physician.

(2) The physician should recognize that a lawyer may deem it necessary to subpoena the physician, and that the physician is obliged to answer the subpoena as any other citizen. He should cooperate with the lawyer with regard to the time and place of service.

Conduct as a Witness

(1) It is improper for a lawyer to attempt to color or otherwise influence the professional opinion of a physician.

(2) The physician's testimony should be unbiased and given in terms understandable to the jury. He should be prepared to testify in detail as to his qualifications, the medical facts in the case, and to give his frank and honest medical opinion in regard thereto. Technical or medical terms, if used, should be carefully and fully explained. The physician should remember that he is not an advocate trying a lawsuit, nor should he feel that he is taking sides on any particular medical issue or fact.

A suggested form of physician's lien notice is as follows:

NOTICE OF LIEN
In favor of John M. Jones, M.D.
1424 Chestnut Street
Springfield, Illinois

Dated this _____ day of _____, 19____.
TO: _____
_____
_____

I am advised that _____, whose address is, _____, has a claim, right, or cause of action against you for injuries received, resulting from an accident or on about _____.

You are notified that I claim a lien upon such claim, right, or cause of action for reasonable charges for medical services rendered said _____ on account of said injuries, the total amount of such lien not to exceed one-third (⅓) of any sums due or paid to such injured person by compromise, settlement, or satisfaction after the satisfaction of any attorney's lien, if any.

This lien is claimed pursuant to an Act providing for a lien for physicians rendering treatment to injured persons approved July 23, 1959 (Chap. 82, Sec. 101.1, Ill. Rev. Stats., 1959).

Money paid in settlement of this claim or in settlement or payment of any judgment or decree on this claim is subject to this lien, and before making settlement, you should consult with me and see that this lien is satisfied.

_____
Signature

(This notice to be served on both the injured person and the parties against whom such claim or right of action exists, by certified mail or in person.)

Suggested form of authorization to be used by lawyer:

(Place)
(Date)

"I, _____, hereby authorize and direct _____, my attorney, or attorneys to pay from the proceeds of any recovery in my case to Dr. _____ the reasonable amount for professional services in the treatment of injuries sustained by me and/or my wife and/or child or children, as the case may be, in an accident which occurred on _____, 19____, said payment to include professional services heretofore rendered and those rendered to the time of the settlement or other disposition of my case for the treatment of said injuries, and fees for testifying in court."

"I further authorize said Doctor to furnish said Attorney with any reports he may request in reference to my injury. I understand that this in no way relieves me of my personal responsibility to pay all such medical charges."

Witness _____
Signed _____

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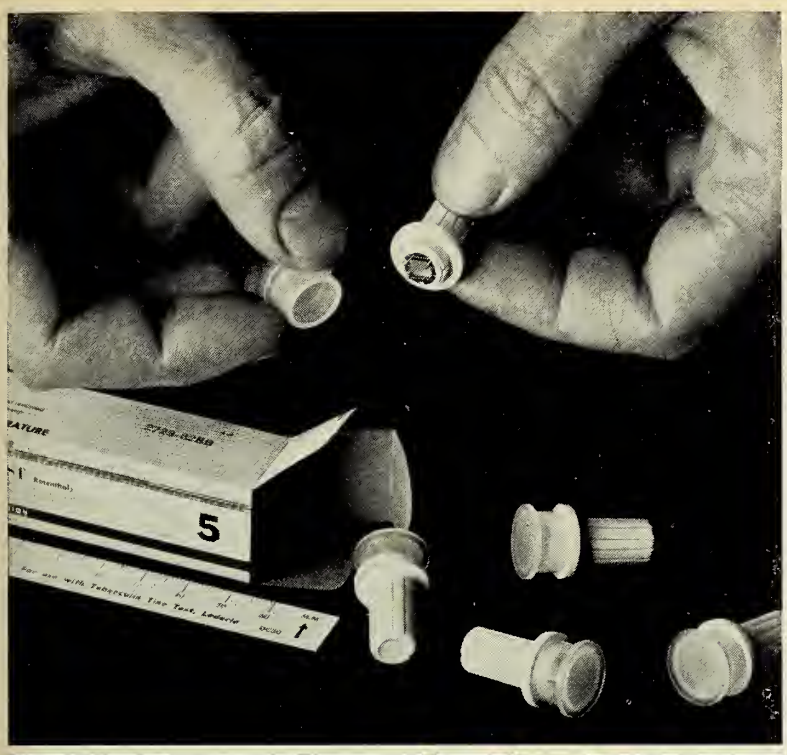
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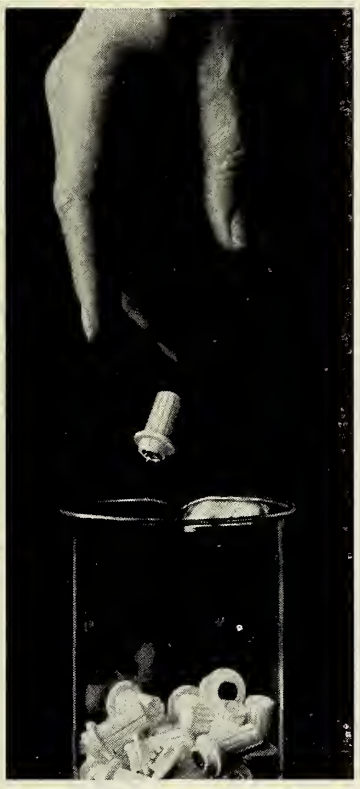


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Varicose Veins, One Week, August 10, September 14
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Vaginal Surgery, One Week, August 10, Sept. 14
Obstetrics, General & Surgical, Two Weeks, September 21
Boord Review Course in Gyn-Ob, Two Weeks, October 26
Fluids & Electrolytes, One Week, August 17
Pediatric Surgery, One Week, September 21
Hand Surgery, One Week, September 28
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Announcement

Bulletin on Treatment of Toxicity Due to Organic Phosphates with Protopam Chloride

The Illinois Department of Public Health, through its Bureau of Hazardous Substances and Poison Control, has recently alerted poison control centers and hospital emergency departments of the availability of Protopam (Pralidoxime) Chloride, for the emergency treatment of toxicity due to parathion, malathion, and other pesticides and chemicals of the class known technically as organic phosphate esters.

Actions and Uses: Reactivates cholinesterase; antidote for poisoning or overdosage due to pesticide or medicinal anticholinesterage agents. The most important action of Protopam (Pralidoxime) Chloride is to relieve paralysis of the muscles of respiration. In pesticide poisoning, atropine is always used along with Protopam (Pralidoxime) to dry secretions and improve central respiratory function.

How Supplied:

(a) Emergency Kit containing 20 ml. vial with 1,000 mg. of sterile powder, 20 ml. vial of Sterile Water for Injection, U.S.P., sterile, disposable 20 ml. syringe, 1¼ inch, 21 gauge needle, and alcohol swab.

(b) Hospital package containing six 1,000 mg. vials of powder without diluent, syringe, needle, or swab.

(c) Bottles of 100 tablets, 500 mg. each.

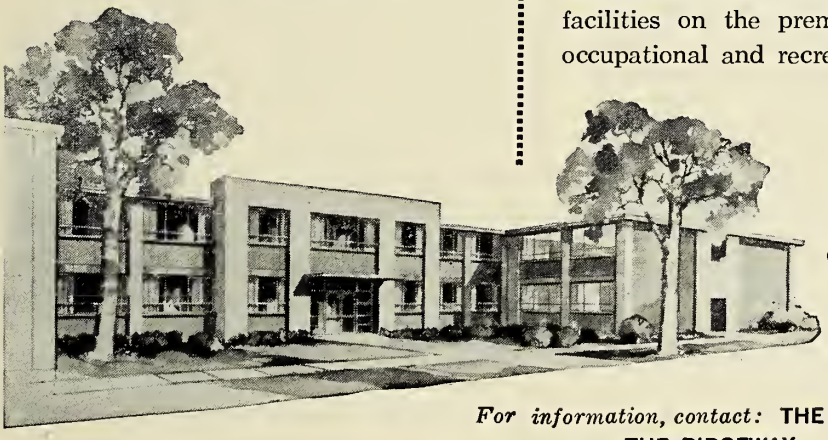
Many pesticides exert their harmful effects by inactivating cholinesterase, a natural body enzyme which is present in all nerves and muscles and is essential to life. It is the job of cholinesterase to destroy acetylcholine, a substance which the body uses to bridge the gap in its system of communications between nerves and muscles. The pesticides allow acetylcholine to accumulate and this produces, at first, incessant, uncoordinated twitching of muscles and, finally, complete paralysis. Death follows quickly when paralysis reaches the muscles of the chest which control respiration. Injection of Protopam reactivates the damaged cholinesterase and quickly corrects the disorder. Many lives have already been saved by prompt use of this antidote.

In a recent release, the Illinois Department of Public Health, quoting from the *Bulletin of the National Clearinghouse for Poison Control Centers*, issued the following statement concern-

(Continued on page 268)

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(Continued from page 266)

ing the "Dangers from Organic Phosphate":

"Recently, in South Carolina, a member of a farm supply company was lifting a sack of parathion crop insecticide onto a shelf above his head. The sack broke and spilled on his face and hands. Death resulted in a few hours. Because organic phosphate insecticides are highly toxic when absorbed into the system from ingestion, inhalation, or skin absorption, it is impossible to say which, if not all, of these routes caused his death.

"This incident involving a broken container immediately was reminiscent of the one in which six children were poisoned in Fresno, California, in 1961. This accident resulted when a shipment of blue jeans was saturated with an organic phosphate which had spilled from a punctured container while in transit. This illustrates that it is necessary to handle organic phosphate insecticides with the greatest of precautions irrespective of the container being a sack, bag, can, or drum.

"Past experience even with empty containers should increase our precautions. An empty burlap bag that had been saturated with parathion caused the death of two youngsters and the serious illness of two others when the children improvised the bag as a swing. Six other boys were reported to be poisoned when they absorbed the residue of parathion that was on the bottom of some empty bottles which they were breaking against a wall.

"The problem of destroying these containers is a real one. For example, the burning of flammable containers involves the possibility of the organic phosphates being in the smoke. Yet, because the potential danger is so great, some disposition is necessary; and this involves proper destruction of the containers. One point, of paramount importance, is that the containers not be reused, under any circumstances. A review of this problem in the Archives of Environmental Health recommends that metal drums be rinsed twice, destroyed by crushing and buried.

"Since these products are highly toxic, anyone so exposed should seek medical attention immediately," the report states.

Further information on the product is available from Campbell Pharmaceuticals, Inc., 254 West 31st St., New York, N.Y.

in the overweight stable adu

...fasting serum levels of insulin are usually normal, postprandial levels excessive[1-3]

...insulin acts in adipose tissue via hexose monophosphate shunt, principal path of glucose conversion to storage fat[1,4]

...excessive endogenous insulin acts to stimulate lipogenesis and weight gain[1,3,4]



Twenty Six Clinics for Crippled Children Listed for September

Twenty six clinics for Illinois' physically handicapped children have been scheduled for September by the University of Illinois, Division of Services for Crippled Children. The Division will count 19 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical social, and nursing service. There will be four special clinics for children with cardiac conditions and rheumatic fever, and three for children with cerebral palsy. Clinicians are selected from among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child for examination or consultative services.

The September Clinics are:

September 2—Carmi—Carmi Township Hospital

September 2—Rock Island Cerebral Palsy—Foss Home, 3808 Eighth Avenue

September 2—Hinsdale—Hinsdale Sanitarium

September 3—Effingham General—St. Anthony Memorial Hospital

September 3—Sterling—Community General Hospital

September 3—Peoria Cerebral Palsy—Roosevelt School

September 4—Chicago Heights Cardiac—St. James Hospital

September 8—East St. Louis—Christian Welfare Hospital

September 8—Peoria General—Children's Hospital

September 9—Champaign-Urbana—McKinley Hospital

September 9—Joliet—Silver Cross Hospital

September 10—Springfield General—St. John's Hospital

September 10—Anna—Anna Community Hospital

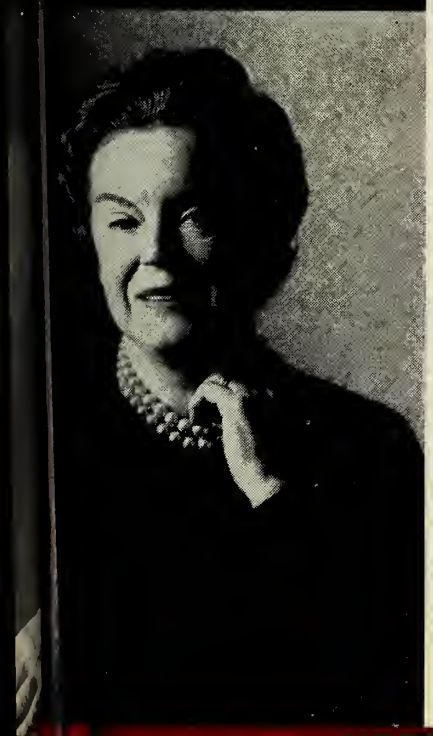
September 15—Alton General—Alton Memorial Hospital

September 16—Jacksonville—Our Saviour's Hospital

(Continued on page 270)

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t synthesis, encourages
adual weight loss[2-9]



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side effects: Gastrointestinal, occurring more often at higher dosage levels, abate promptly upon dosage reduction or temporary withdrawal. **precautions:** Occasionally an insulin-dependent patient will show "starvation" ketosis (acetonuria without hyperglycemia) which must be differentiated from "insulin-lack" ketosis which is accompanied by acidosis, and treated accordingly. Lactic acidosis has been reported in non-diabetics and diabetics treated with insulin, with diet, and with DBI. Question has arisen regarding possible contribution of DBI to lactic acidosis in patients with renal impairment and azotemia and also those with severe hypotension secondary to myocardial or bowel infarction. Periodic B. U. N. determinations should be made when DBI is administered in the presence of chronic renal disease. DBI should not be used when there is significant azotemia. Any cardiovascular lesion that could result in severe or sustained hypotension, which may itself lead to development of lactic acidosis, should be considered cause for immediate discontinuation of DBI at least until normal blood pressure has been restored and is maintained without vasopressors. Should lactic acidosis occur from any cause, vigorous attempts should be made to correct circulatory collapse, tissue hypoxia, and pH. **contraindications:** Severe hepatic disease, renal disease with uremia, cardiovascular collapse. Not recommended without insulin in acute complications of diabetes (metabolic acidosis, coma, severe infections, gangrene, surgery). **pregnancy warning:** *During pregnancy, until safety is proved, use of DBI, like other oral hypoglycemic drugs, is to be avoided.* Consult product brochure for full information.

1. Gordon, E.S.: Metabolism 11:819, 1962. 2. Grodsky, G.M. et al.: Metabolism 12:278, 1963. 3. Weller, C. et al.: Scientific Exhibit, A.M.A., June 1962. 4. Sadow, H.S.: Metabolism 12:333, 1963. 5. Faludi, G.: J. Am. Med. Women's Assoc. 18:722, 1963. 6. Faludi, G.: Geriatrics 18:452, 1963. 7. Williams, R.H.: Textbook of Endocrinology, Ed. 3, Saunders, Phila., 1962, p. 610. 8. Weller, C. and Linder, M.: Am. Therap. Soc., June 1963. 9. Moss, J.M. et al.: Med. Times, July 1964.

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—S. P. Lucia, "A History of Wine as Therapy," Lippincott, 1963.

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—"Alcohol and Civilization," McGraw-Hill, 1963.

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—Lolli, G.: Quarterly Jl. Studies on Alcohol, Sept. 1963.

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News *(continued from page 269)*

September 16—Evergreen Park—Little Company of Mary Hospital
September 17—Rockford—Rockford Memorial Hospital
September 17—Decatur — Decatur & Macon Co. Hospital
September 17—Elmhurst Cardiac — Memorial Hospital of DuPage Co.
September 18—Chicago Heights Cardiac—St. James Hospital
September 22—Peoria General — Children's Hospital
September 23—Centralia—St. Mary's Hospital
September 23—Springfield Cerebral Palsy (P.M.)—Memorial Hospital
September 23—Elgin—Sherman Hospital
September 24—Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital
September 24—Sparta — Sparta Community Hospital

Illinois Physicians Active at AMA Meeting

Dr. Leo P. A. Sweeney, chairman of the Illinois delegation to the A.M.A., reported that many members of Illinois State Medical Society participated in the San Francisco convention of AMA, held June 21-25.

Illinois physicians elected to offices were Walter C. Bornemeier, Chicago, re-elected vice speaker of the AMA House of Delegates; Maynard Shapiro, Chicago, alternate delegate, Section on General Practice; Paul H. Holinger, Chicago, delegate, section on Laryngology, Otology and Rhinology; Benjamin Boshes, Chicago, alternate delegate, Section on Nervous and Mental Diseases; John P. Waitkus, Chicago, alternate delegate, Section on General Surgery; Henry A. Holle, Chicago, alternate delegate, Section on Preventive Medicine; Carl E. Clark, Sycamore, chairman of Advisory Committee to the American Association of Medical Assistants.

Chicagoans elected to posts with the American College of Chest Physicians were: William E. Adams, second vice president; Albert H. Andrews, treasurer, and Karl H. Pfuetze, assistant treasurer.

In addition to those elected to office, 21 Illinois men won exhibit awards, four appeared on the Council Postgraduate programs, and one was awarded a prize in the art show.

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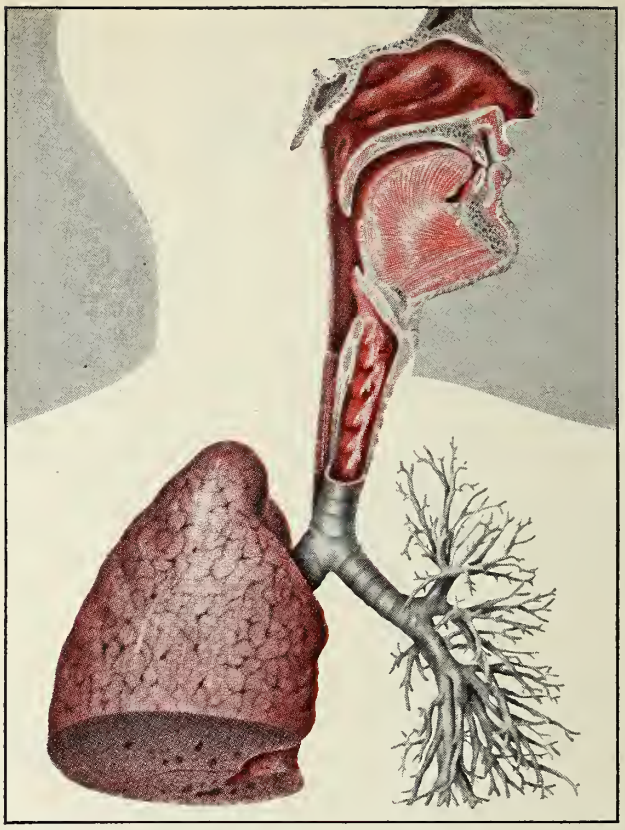
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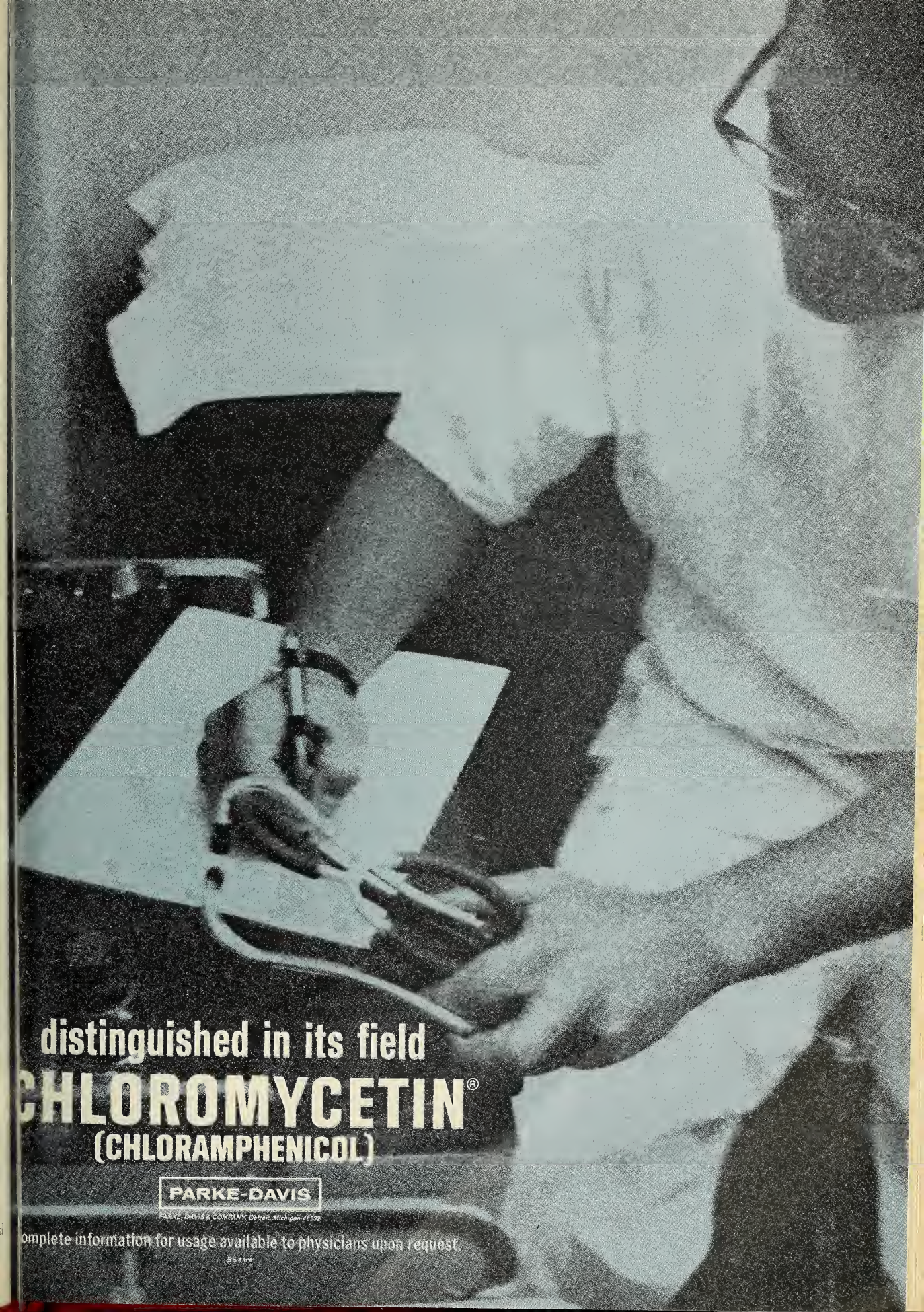
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AS I SEE IT FROM '360'

By Robert L. Richards
Executive Administrator

Presenting Speeches and Ideas

Most of us must sell others on ideas. Our speech making may be done before a service club, an executive group, an operating committee, a Board of Trustees, or the membership of our organizations. I am told that we should accept the modern definition of a speech as "a well planned conversation before a group." The remainder of this column will be devoted to a brief discussion of the service which is now available to county medical societies on a planned basis from the Smith Kline and French Laboratories' New Speech Training Service, which is a program designed to help professional organizations in the health field to form public speaking and public relations programs.

Speaking does make a difference. Accumulative experience of many organizations is convincing evidence that a public speaking program aimed at the "grass roots" can: (1) aid in establishing a more favorable public image of the organization and its programs; (2) help combat restrictive legislation; (3) obtain support for legislation, in the health field; (4) enable members of the organization to maintain regular contact with the public whom they serve and depend on for support; and (5) increase the number and effectiveness of those individuals speaking out on behalf of the health team.

A typical SKF training seminar lasts two days and involves 24 participants. Experience shows that this type of program offers the best results. Shorter seminars and larger groups can be accommodated if necessary. Included in the typical agenda is instruction, and intensive individual participation in the preparation and presentation of speeches, the use of visual aids, handling questions and answer session, and the mechanics of operating a speakers bureau.

If you are interested, you are invited to contact the speech training service of Smith Kline and French Headquarters, Philadelphia 1, Pa.

DON'T MISS
the special
COMMUNITY HEALTH WEEK
message from
STAN MUSIAL
on pages 371-372 of this issue
RIGHT IN FRONT OF THE PULSE!



INTRODUCTION / J. Ernest Breed, M.D.

Fantastic advances are being made in all fields of medicine. It is difficult for a physician to keep informed of the newer knowledge except in his field of special interest. That his patients may benefit, however, it is vital that he have information on the new accomplishments in other fields.

In the past two decades the field of radiology has experienced so many changes that it appears appropriate to present a series of short articles, designed to orient physicians on the present radiologic possibilities and of the trends for the future.

When the atomic bombs exploded over Nagasaki and Hiroshima, it changed the course of all future wars and the reverberations of these explosions have affected most of man's activities. Political, social, and moral concepts are still in a nebulous state with changes occurring daily.

In medicine the discipline of radiology received the greatest shock as the atomic bomb is a child of nuclear physics, and its radiations of various kinds constitute great promise, as well as a great threat, to society. The radiations of particular interest to the radiologist are ionizing electromagnetic rays (x-rays and gamma rays) and particle radiations (alpha rays, beta rays, proton beams, neutrons, etc.). We have learned that by bombarding stable elements with some of the particles we can make isotopes of these elements and even transmute one element into another. Many of these new unstable isotopes will in turn discharge gamma rays and some even throw out particles of matter.



Dr. Breed is Associate Professor of Radiology, Northwestern University Medical School, Chicago, Illinois.

In the past twenty years radiologists working with nuclear physicists, geneticists, physiologists, pathologists, and a host of others have been trying to integrate the newer knowledge into medical practice. Information increases daily from innumerable research sources, so that the medical uses of radiant energy are in a constant state of flux.

The newer roentgenographic procedures are additive to our wealth of diagnostic acumen and at times they are almost revolutionary. The incorporation of the radioactive isotopes and megavoltage radiations obtained from particle accelerators have added greatly to our therapeutic armamentarium but have not replaced conventional x-radiation nor radium therapy as our major therapeutic tools.

Although the radioactive isotopes are a part of radiology, they are also useful in other fields. They are indispensable to research workers in many areas. Most of the disciplines of medicine have utilized them in new diagnostic tests and here their future is indeed brilliant.

The purpose of this symposium is to present in brief and simple form pertinent and up to date information that is essential for all physicians if their patients are to be benefitted by present day techniques in radiology.



NUCLEAR PHYSICS

/ *Leonidas D. Marinelli, M.A.*

During the first quarter of this century, many physicists were greatly concerned with exploring the nature of the atom. Their efforts established that the atom was composed of a central, small, exceedingly dense and positively charged nucleus surrounded by oppositely charged electrons of equal total charge but of much lighter weight, orbiting at relatively large distances from it. This extensive effort of clarification followed, rather than preceded, the immediate use of x-rays by the medical profession after Roentgen's discovery and the use of gamma rays from radium, soon after its isolation by the Curies. In time it was recognized that x-rays were produced by interfering with the motion of electrons, whereas gamma-rays originated in those nuclei which underwent natural radioactive decay.

Inquiries into the structure of the nucleus were started before the study of the extranuclear portion of the atom was completed. They consisted in attempts to disrupt the nucleus by bombarding it with either the gamma, beta, or alpha rays emitted by the natural rarioactive substances available at the time. This experimental procedure, which led to the first nuclear transformation by Rutherford in 1919, was used with renewed vigor in the early thirties and led to the discovery of the existence of the neutron (1932) and of artificial radioactivity (1934). At the same time it was established that the nucleus could also be disrupted by bombardment with protons and deuterons accelerated by artificial means (atom smashing).



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The existence of the neutron led to the very important realization that the nucleus was made of neutrons and protons, the latter balancing the charge of the orbital electrons; it also gave physicists one tool which could penetrate the nucleus much more easily than other particles because, being devoid of charge, the neutron was not repelled by it. At the same time, ingenious developments in accelerating equipment permitted the use of bombarding particles of energy sufficient to overcome the nuclear repulsion and to interfere with the inner components of the nucleus.

Since then, our concept of the nucleus has evolved rapidly to clarify the objectives of these "impact" experiments which produce nuclear transformations and to suggest successive theories attempting to describe the "debris" produced during these experiments.

Nuclear models have come and gone as the range and detail of experimental facts have accumulated at a steadily increasing pace. The first to appear was the "liquid drop" or statistical model of Bohr which accounted qualitatively for the reactions initially observed; to this day it can still be considered to give a simplified view of how a heavy nucleus behaves when disturbed by a moderately energetic probing particle. This model became inadequate as particles of increasing energy

came into use in nuclear investigations; a more acceptable nuclear "shell model" followed which endeavored to systematize the neutrons and protons in the nucleus in terms analogous to those used to describe the distributions of electrons in the atom. In a way it can be said that the shell model has restored individuality to the nucleus.

No theory of the nucleus exists today that is completely in accord with all experimental information available; both the "liquid drop" and "nuclear shell" models complement each other without offering a unifying concept. Nevertheless, successive models termed the "collective" model and the "optical" model are being considered today to account for collective oscillations observed in the heavier nuclei and for the semi-transparency that the nucleus presents to particles of very high energy.

Efforts to transform the heaviest nuclei by the addition of neutrons led to the discovery, in 1939, of fission, a reaction which differs from ordinary decay or other more prevalent transformations by the fact that certain heavy nuclei break up into two or at most three heavy fragments with the production of very large amounts of energy. This, of course, is the phenomenon utilized in detonations and "atomic" power-stations. The addition of neutrons to nuclei has also led to the creation of nearly a dozen elements heavier than uranium. Other surprises were to await the workers in these fields, such as spontaneous fission of some of these elements and the discovery of reactions believed to take place in special categories of stars.

The increase in the energy of the probing particles has led to the discovery of fine debris called, with the passage of time, first elementary and later "strange" particles. Their number, within a little more of a decade, has increased from three (μ, π, mesons, and neutrons) to about one hundred today. These particles, believed to be the shattered glue of the nucleus, are being extensively investigated by "high energy physics" whose tools are generators of protons propelled at energies as high as thirty billion volts, comparable to the energies observed in particles which compose cosmic radiation.

What will these high energy investigations mean to medicine? This is difficult to predict, but the suggestion has already been made that the use of one of these particles (the π meson) could lead to more desirable energy distribution in the treatment of deep-seated cancer.

For the time being, the artificial creation of radioactive isotopes for practically every element of the periodic table has endowed the medical profession with a wealth of material which still remains to be exhaustively explored for the best results in diagnosis and therapy. More important, perhaps, is the application of these radioactive elements to the fields of pharmacological and biochemical research, with its attendant benefits in the clarification of diagnosis and in prevention and/or treatment of disease. It should be realized that by making some elements radioactive by neutron bombardment in nuclear reactors—namely by "activation" analysis—it has also become possible to measure extremely small amounts of materials in biological specimen. This technique is bound to elucidate the movement of tracer elements in the biosphere.



RECENT ADVANCES IN RADIATION BIOLOGY

/ E. L. Powers, Ph.D.

Biological organisms respond to very small inputs of energy in the form of x- or γ-rays, *e.g.*, death of a man can be caused by a dose (energy randomly distributed in the body) of X-rays that causes a temperature rise of only part of one degree, well within physiological limits. What is so special about this interaction? What is its physics and chemistry? What effects are induced? How can they be modified? What is peculiar about the living organism that makes possible this large reaction to such a small stimulus? In attempting to answer questions like these, radiation biology has discovered information with interesting implications for human biology. This brief review will discuss several areas of research in which there has been significant progress.

Cellular biology. The efficiency with which high energy radiations bring about many of their effects in multicellular mammalian systems must be considered in part in terms of radiation effects on isolated cell systems. For instance, while the life expectancy of a tumor after treatment by X-rays is determined by a number of factors arising from its being part of a complexity, no portion of which is entirely independent, the life-expectancy of an irradiated tumor depends also upon factors that are intrinsic within the tumor cells. These are recognized and characterized only independently of the host organism, as are the interactions between the intrinsic and extrinsic factors.



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Progress in mammalian tissue culture techniques has made possible quantitative study of the radiation sensitivity of a number of kinds of isolated mammalian cells. Measured *in vitro,* the mammalian cells tested, normal and tumorous, have shown about the same radiation sensitivity, and about the same reactions to modifying agents. With respect to radiation sensitivity, these cells are not very different. They are similar in the different sensitivities they exhibit to radiation in different portions of their division cycles, and in certain recovery-like phenomena following sublethal doses. With the not implausible assumption that the *in vivo* response is nearly the *in vitro* response, one can rationally design radiation schedules to maximize tumor destruction and minimize radiation damage to other issues.[1]

The oxygen effect. It has been known for many years that the cell or organism irradiated in an oxygen atmosphere is more sensitive to X-rays than they are when irradiated in the absence of oxygen. The recent studies have been directed to better quantitation of the effect, application of the results to clinical situations, and understanding of the physicochemical mechanisms involved. For instance, in isolated mammalian cell systems, cell death is induced by one-third the dose in O_2 as that required in its absence. This makes an enor-

mous practical difference. Gray points out for a particular instance that after single doses of 4,500 rads to groups of cells, a 1 in 10 chance of the survival of a single cell is expected if the initial population is 10^{11} cells (50 g. tissue) when well oxygenated, but only 10^4 cells in the initial population (0.008 mg. tissue) if anaerobic, *i.e.*, 10^7 more cells are killed in the presence of oxygen. There is good evidence that there are groups of anoxic cells in the poorly vascularized centers of some tumors, so it is likely these survive doses that effectively sterilize oxygenated portions. Practically, the O_2 tension within the tumor must be raised, or the O_2 content of the surrounding healthy tissue must be decreased, to gain purchase on the tumor. This is the biological basis of the so-called "hyberbaric" (high partial pressure) O_2 radiation therapy which is being tested now in laboratory and clinical experiments with good results.[2]

With respect to basic mechanisms, the frequently cited postulate that O_2 sensitizes because of its interaction with radiation-induced free radicals has been demonstrated experimentally in a bacterium. When the cells are dry, reaction of O_2 with radicals is quite certainly the basis of part of the O_2 effect; there is another portion not understood. To what extent these two O_2 effects operate in the mammal has not yet been explained.

Chemical modification of response. The important experiment of Patt *et al.* in 1949[3] showed that resistance of mice to X-rays is heightened when cysteine is injected prior to irradiation. Subsequent experiments have shown that —SH containing compounds, and higher alcohols, are effective protectors, with the highest degree observed to date being about 2X for mammals. One of the important aspects of these studies is the contribution they make to understanding of mechanism of radiation damage. The suggestions that sulfhydryl compounds protect because 1) they complete in the O_2 effect, and 2) they react with free radicals, are supported by the experiments in bacteria showing that H_2S gas indeed does remove radicals, thus preventing them from reacting with oxygen. Of course, there may be other actions also, but it is very reasonable that competition with O_2 for free radicals explains part of the effect. In bacteria the alcohols (glycerol for example) protect probably by being absorbed on the actual sensitive sites in the cells, thus protecting the cells from several kinds of damage.

In bacteria, and to a lesser extent in plant seeds, water has been shown to operate in two general ways: at low water contents it can be a protector against X-irradiation; and, at high contents, a sensitizer to the same agent. For an understanding of basic mechanisms, these are important facts. The degree to which these phenomena operate in the mammalian cell, and in organisms, is not known. But the great improvement in quantitation in tissue culture techniques[1] now makes conceivable experiments of this and similar type on cellular systems derived directly from the tissues of interest.

Biological modification of response. Among the numerous biological factors that modulate the response of mammals to X-irradiation, the actions of unirradiated cells in irradiated organisms is one of the most dramatic. One important symptom of acute radiation damage in mammals is the severe, and often fatal, depression of hematopoietic activity. It was shown by Jacobson *et al.* that physical shielding of the spleens of mice during irradiation, or implantation of unirradiated spleens, prevented the development of this hematologic depression, and survival increased markedly. The injection of homogenates of spleen tissue and of bone marrow had the same effect.[4] After some time, it was realized that in these instances new colonies of hematopoietic tissue are established in the irradiated animals, being direct descendants of the unirradiated injected cells, and tiding the animal over the period when his own blood-forming system is inactive. While affecting the hematopoietic systems, the radiations at the same time disturbed the immune mechanisms of the irradiated animals, preventing the normal production of antibodies against the injected cells, thus allowing the foreign cells to grow.

Interesting implications for man from these (and many similar) studies are 1) the possibility of therapeutic injection of homologous hematopoietic tissues after accidental whole body irradiation, and 2) the possibility of homologous transplants of organs into deliberately irradiated persons. Clinical trials of

these two applications have been promising; and a new order of studies on basic problems of mechanisms of antibody formation and protein synthesis is made possible by this particular radiation effect.[5]

Leukemogenesis. One of the common diseases in experimental animals that survive irradiation is leukemia of various kinds. Many factors influencing its rate of appearance have been recognized and described, and are under current laboratory investigation. At Hiroshima and Nagasaki, several studies on human survivors have been underway that attempt to relate (among other things) dosage, age and incidence of type of leukemia, and other kinds of malignancies. It appears that leukemia is in higher incidence among those exposed to higher radiation dose, and, in this group, higher in children than in adults. Independent studies in several other countries show that in unirradiated populations the incidence of some types is higher in children also. In some animals as well, experimentally-induced leukemia is significantly age-dependent, encouraging the thought that a contribution to the human problem from these studies is attainable. Practically, these make very important the current studies on leukemia incidence in children irradiated *in utero* during diagnostic irradiation of the mothers. This situation is equivocal at this writing, but a marked increase may be allowed by some of the data.[6] These studies in leukemia-induction are a part of a large current activity, theoretical and experimental, on the general problem of radiation carcinogenesis.

Radiation genetics. There are two aspects of this general topic: 1) what is the effect of radiation on the genetic apparatus; 2) what is the effect of the genetical constitution of the organism on its response to radiation? Both are of paramount importance. That genes and chromosomes can be altered by X-rays has been known for many years—in fact, their radiation sensitivity is one of the reasons for the remarkable advance in knowledge in genetics during the 1930's and later, when biologists used radiation as an experimental perturbating agent. The recent studies of interest here concern the response of the mammalian germ line to radiation. Because of long periods of immaturity and of low mutation rates (therefore, large numbers of animals maintained for long periods of time), these are difficult experiments. Measurement of mutation rates of a limited number of genes in mice reveals that the radiation-induced increases in rate vary from gene to gene within the same organism; that these rates may or may not have some relationship to spontaneous mutation rates; that there may be marked species differences; that sex and stage in gametogenesis are important determiners. This is a very interesting biological situation, but a difficult one when one wonders about the effect on the mammalian germ line of small doses of radiation; and, further, what is the effect of these changes on the genetic constitutions of future populations.

The long-known ability of X-rays to cause chromosomal abnormalities is being measured in mammals, including humans, with recently developed explant techniques in which aberrations are scored at metaphase in dividing cells. Persons who have been irradiated (reactor accident victims, survivors at Hiroshima and Nagasaki), or who are carrying bone-deposited radioisotopes, are sources of information on the role of chromosomal damage in delayed radiation effects.

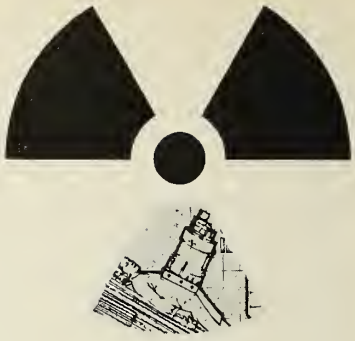
These intense studies in radiation cytogenetics in the experimental mammal are paralleled by similar ones on the normal and abnormal gene and chromosome complement in man. A number of well-organized clinical conditions can now be associated with abnormalities in number or structure of chromosomes, and the list of anomalies that can be associated with mutations of several kinds is now large. This "cataloging" activity is a prelude to understanding of the mechanisms of determination. The time-lag between the development of cytogenetics as an exact science and its proper application to man was long. Because of the intense interest in the fundamental details of the gene and its action, the ways in which it is damaged by external agents, the importance of these to the health of man, the time-lag between application of the current fundamental studies in genetics (such as the nature of the gene itself) to the human situation will be very much shorter.

The biological basis of radiation sensitivity or resistance must be explicable partly in

terms of the genetics of the organism. Between defferent kinds of organisms, wide differences in sensitivity are observed. Within particular cell lines, very little variation from cell to equivalent cell is observed. Within groups of animals (a particular strain of mice, for example) in which genetic heterogeneity is expected, a continuum of sensitivities is observed: some animals of a lot die after low dose; many die at intermediate doses; and a few survive relatively high doses. This heterogeneity in response is characteristic of all mammals and probably is a reflection of genetic differences among them. Experiments on this general problem at the organism level (mice) reveal that there are indeed a number of genetic determiners of radiation sensitivity. The death of an organism has physiologic bases, so it is not improper to consider these as studies on the genetics of mammalian physiology. Among micro-organisms the differences in sensitivity to radiation can be ascribed to specific gene differences; and in some instances the differences between the mutants can be abolished by external addition of chemicals.[7]

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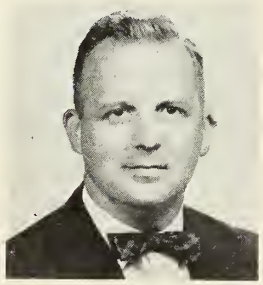
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RECENT ADVANCES IN DIAGNOSTIC RADIOLOGY

/ *Robert D. Moseley, M.D.*

In recent years there has been spectacular progress in many areas of diagnostic radiology. Basic to many of these advances has been the continued development and refinement of diagnostic radiologic instrumentation, including the development of fluoroscopic image intensification and the feasibility of motion picture radiography which this development made possible. The application of television to fluoroscopy, also generally made possible by the development of image intensifiers, has greatly increased the accuracy and usefulness of fluoroscopic techniques. Many other technical developments which have occurred in the past twenty years contribute to the increased accuracy of radiologic procedures and to a decrease of the exposure of the patient to X-rays. It is most encouraging to note that, far from being a static situation, these developments seem to continue to occur at a steadily increasing rate. For instance, the development of more powerful X-ray tubes, the development of five-focus X-ray tubes, the development of grid-controlled X-ray tubes for extremely short exposures, have contributed to improvement in the exposure techniques and increased the information obtainable from a radiograph. Similar improvements have resulted from continuous improvements in X-ray films and screens.



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X-ray apparatus in general has undergone a spectacular transition from electro-mechanical devices into electronic devices within the past decade, making possible pulsed short exposures for cinéradiography, control of correct exposures by means of phototimers, etc. With this transition to electronic devices there has also occurred a less spectacular, but nonetheless significant, advance in the search for better, more convenient and more efficient methods for the radiologist to investigate the patient. These modern trends in diagnostic radiologic instrumentation have been accomplished, keeping in mind an additional important aim: the reduction of patient exposure.

The continued development of safer, less toxic, more opaque X-ray contrast materials constitutes an outstanding contribution of pharmacological investigation to the advance of diagnostic radiology.

Automation in many areas of diagnostic radiology, particularly in film processing, has begun to make its impact felt in relation to improved patient care.

The development of precise body section radiographic equipment employing stable multi-directional movements makes possible the production of body section radiographs of very thin (0.5—1.0 mm.) body segments. The visualization of the ossicles of the ear is one of the extensions of diagnostic radiology made

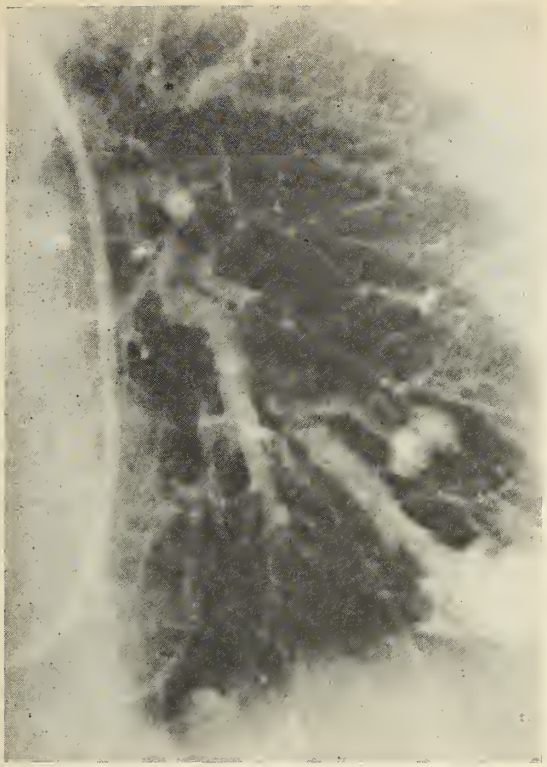


Figure 1
PULMONARY ARTERIOGRAM
Several arteriovenous malformations are demonstrated in the right lung.

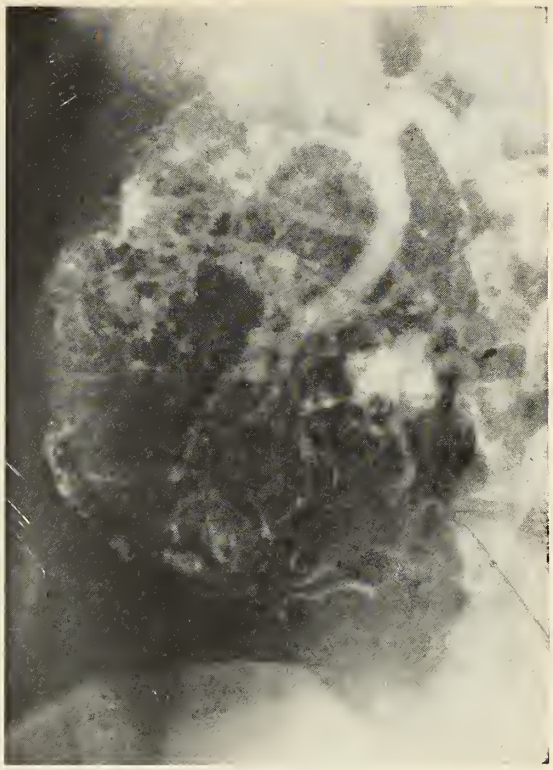


Figure 2
SELECTIVE RENAL ARTERIOGRAM
Many irregular tumor vessels and contrast material pooling indicate a hypernephroma.

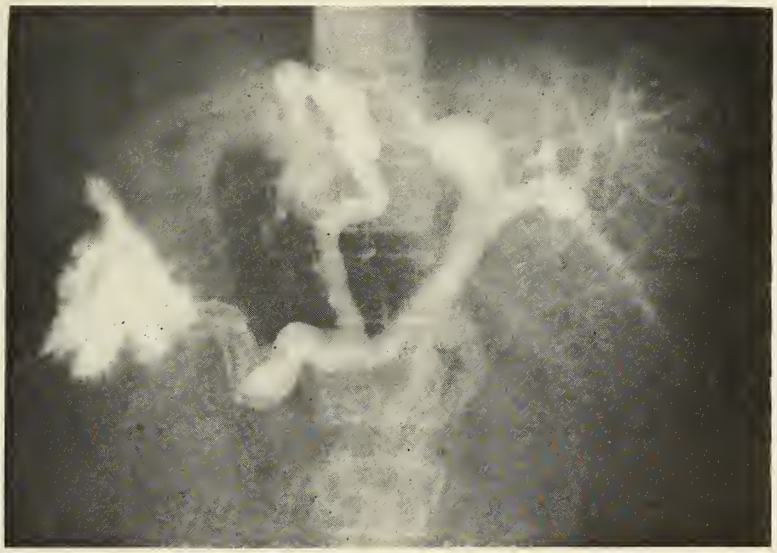


Figure 3
PERCUTANEOUS SPLENOPORTOGRAM
Collateral vessels fill esophageal varices. Patient has hepatic cirrhosis with portal hypertension.



Figure 4
Intravenous carbon dioxide injection outlines the right atrial wall, which is thickened as the result of pericardial effusion.

possible by this technical development.

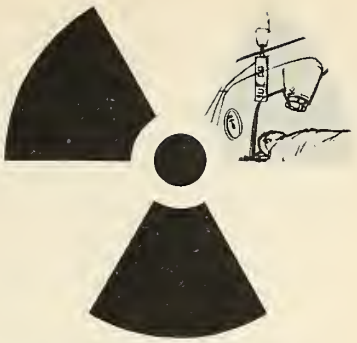
The raison d'être of instrumentation in diagnostic radiology is the possibility that such instrumentation procures for the extension of the radiologist's ability to understand and diagnose disease. Diagnostic methods made possible or effective in recent years due to instrumentation improvements are legion. But undoubtedly the most important advance in recent years has been the elaboration of angiography —the radiologic examination of the vascular system.

In addition to the low toxicity and high density of modern contrast materials, which have already been mentioned, the routine use of angiography, which was introduced as early as 1923, has been made possible in recent years by the development by Seldinger of the method of percutaneous catheterization of the vessels.

Investigation of the heart by angiographic techniques (angiocardiography) and angiographic examination of the cerebral vessels form indispensable techniques in modern cardiac radiology and neuro-radiology. But angiographic examinations are now utilized in relation to essentially all organ systems. The arteries of the neck and arms, the thoracic aorta, the pulmonary arteries (Figure 1), the abdominal aorta, the renal arteries (Figure 2), the pelvic arteries and the arteries of the lower extremities may be selectively investigated. The veins are investigated also: the veins of the lower extremities, the inferior vena cava and the veins of the upper extremities and thorax. Examination of the portal system (splenoportography) by percutaneous puncture of the spleen (Figure 3) is an essential part of the investigation of a patient with portal hypertension.

Occasionally in recent years carbon dioxide has been used as a safe contrast material instead of organic iodine compounds (Figure 4).

Diagnostic radiology, a young specialty, is advancing with great vigor in the continuing effort to produce safer and more accurate diagnostic techniques; its contributions to medicine, already significant, will continue to grow through research in instrumentation and investigative methods.



RECENT ADVANCES IN RADIOTHERAPY / *William T. Moss, M.D.*

Advances in radiotherapy have paralleled improvements in our equipment, extension of our knowledge of the natural history of cancer, and increased knowledge of the response of cancer and normal tissues to radiations.

Improvements in our equipment have been spectacular in the past ten years. Supervoltage and telecobalt^{60} techniques are now available throughout the country. This equipment, which was formerly regarded a luxury, is now accepted as indispensable to curative irradiation of many deeply situated cancers. Therapy beams from this equipment are superior to medium voltage beams for the treatment of deeply situated cancers in several respects. Penetration is greater. The nature of absorption of such a beam spares the superficial tissues. This means that for given cytolethal effect deep in the body the skin is affected less with Co^{60} or supervoltage beams than with medium voltage beams. Bone absorbs a lesser proportion of Co^{60} radiations than of medium voltage radiations. The increased penetration, skin sparing, and bone sparing decrease the undesirable side reactions to irradiation. For those of us who have experienced the limitations imposed by severe skin and bone reactions following high dose medium voltage therapy, the availability of supervoltage or Co^{60} radiations represents the greatest single recent advance in our specialty. With this advance, the cure rates are increased largely in those patients who were previously undertreated because of skin reactions. There can be no question but that the decreased severity of skin reactions encountered with Co^{60} beams will encourage more frequent adequate irradiation of many cell types. The reaction is easier for the patient and the port arrangement is usually easier for the radiologist.



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Our knowledge of the spread of cancer and of the radiation tolerance of normal tissues has justified a continuing improvement of techniques. Examples of this are seen for almost every radiotherapeutic disease. For example, low to medium dose irradiation of limited ports for apparent localized lymphoma is being replaced by large port high dose irradiation with the hope of increasing the survival rates. The adjacent apparently uninvolved areas are now commonly included in the irradiated volume. Initial results have prompted us to extend this practice.

The skin-sparing characteristics of supervoltage beams and greater knowledge of regional metastases justify doses in the cancerocidal range directed to the internal mammary and paraclavicular nodes following radical mastectomy, and lateral pelvic nodes in carcinoma of the cervix, endometrium, and bladder. High doses can also be delivered to the nodes of the neck through anterior and posterior tangential beams—a technique recently

found effective for a limited number of selected patients with cancers of the head and neck. With the notable decrease in skin reactions possible with Co^{60} irradiation combinations of irradiation and surgery are being reinvestigated and some promising results are being obtained especially for cancers of the head and neck region.

With improvement in cancer localization has come increased precision in radiation administration. The most notable example of this is the contribution of the brain scan to our knowledge of location, size and shape of intracranial lesions. We can now tailor our beams to the area of brain involvement with much less risk of needlessly damaging normal brain. Thus, higher doses can be given and control rates can be expected to improve. The same can be said with regard to the lymphangiogram of abdominal lymph nodes. Irradiation of retroperitoneal lymph nodes can be given or withheld on a much more rational basis with the additional information provided by this valuable new study. A large group of studies combining chemotherapy and radiotherapy are under way with the hope of increasing the effectiveness of the irradiation without seriously increasing the undesirable side effects. As yet, no helpful combination has been found. Hyperbaric oxygen during irradiation appears to have theoretical merit and is being evaluated on a clinical scale in several centers.

Computer techniques for dosage calculations are becoming more available and promise us precision that was formerly unheard of. With such precision the hazards of underdosage and overdosage are diminished.

Radiotherapy can no longer be regarded as a prescription service with a technician dispensing radiations in a haphazard fashion. The medical profession's appreciation of the value of radiations and their insistence that skill be used in the administration of these rays has vastly improved the overall performance within the specialty. Indeed the great strides in our specialty are a result of professional appreciation of the fact that properly administered radiation therapy can cure many types of cancer and can palliate an even larger number of hopelessly incurable patients with an acceptable risk. This improvement in training within our specialty, the increase in knowledge of cancer spread and radiation effects, and the improvement in equipment can be expected to continue at an even more rapid rate in the future.



USE OF RADIOACTIVE ISOTOPES IN MEDICAL PRACTICE

/ *Lindon Seed, M.D.*

The impact of radioisotopes in medicine will probably exceed that of the x-ray. The radioactive "tag" is a necessary adjunct in a high percentage of research problems, in physiology, biochemistry, and especially molecular biology. There are 276 radioisotopes adaptable to medical use, and it is possible that each of these could be adapted in many different ways. "Already there are too many isotopes available to medicine, and too much necessary to the use of each for anybody to remember" (Marshall Brucer). As an example there is a book recently published entitled "Radioisotopes and Bone" in which 500 pages are devoted to this subject alone. At present the applications in clinical medicine are much less than in research; the average practitioner will only occasionally require the services of an isotope laboratory. How this need will increase to equal the daily use of the x-ray laboratory cannot be pinpointed any more than one could point out 40 years ago the paths by which roentgenology would reach its present importance.

The recognized clinical uses of radioisotopes are known to you. I will briefly enumerate the most important of them, adding a few comments as to their applicability and practicability, and then list some of the newer investigative applications, as presented at the 1964 meeting of the Society of Nuclear Medicine.



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I^{131} in the Diagnosis of Thyroid Disease. The per cent of thyroid uptake of I^{131} is an excellent criterion for the recognition of hyperthyroidism in a toxic diffuse goiter. It is probably the best laboratory test for this purpose when the diagnosis is actually in doubt. It is of no value in toxic nodular goiter, and of limited value in hypothyroidism. The T-3 resin or red cell uptake test measures the amount of radioactive triidothyronine that is absorbed by the red cells or resin after incubation in a sample of the patient's blood. It is based upon the fact that T-3 is normally bound to an albumin in the blood and when all the binding places are taken up, as in hyperthyroidism, the added radioactive T-3 will not find a binding place and will be adsorbed on to the red cells or the resin. It is a useful test, but no more so than the PBI or the BMR. It has the virtues that blood is merely drawn and sent to the lab and that iodine medication does not influence it.

The Thyroid Scan. In the thyroid scan 24 hours after the patient is given a tracer dose of I^{131}, a scintillation counter on a mechanical stage is passed back and forth across the neck. The amount of radiation detected by the probe is recorded as marks on a paper or variations of light on an x-ray film, or even printed out in colors indicating different de-

grees of radioactivity. This basic technique is the same for all types of scanning procedures. The thyroid scan will outline a diffusely enlarged gland, it will distinguish between "hot" and "cold" nodules, it may localize an intrathoracic goiter (it usually does not), and with large tracer doses it may delineate metastases in the neck or elsewhere. Since a "cold" nodule is more suspect than a functioning nodule, it gives some information influencing the decision at to whether it is surgical. I believe that a routine scan of nodular goiters will furnish enough information to make it a profitable venture.

I^{131} in the Treatment of Hyperthyroidism. I^{131} is the treatment of choice for toxic diffuse goiter certainly at all ages above 40 and probably down to 20. The only real objection to it's use is the possibility that it may be carcinogenic. Since no cancers have appeared in adults, this objection cannot be too serious. It is, however, of limited use, if any, in the treatment of toxic nodular goiter, and of no use whatever in non-toxic goiter.

I^{131} in Cancer of the Thyroid. About 10 per cent of carcinomas will pick up enough I^{131} to warrant therapy with it, and this is indicated only if the lesion cannot be removed surgically. If the cancer has the capability of forming follicles with colloid in them, it will often retain the ability to trap iodine. The papillary and the undifferentiated tumor will not do this.

The Renogram and the Renoscan: These procedures have been devised hopefully as screening tests for hypertensive patients in order to detect those with remedial vascular defects, or those in whom renal arteriography is indicated. In certain instances their value is unquestioned, but they have not as yet been established as a profitable routine screening agent for all hypertensives. For a selected group, yes, but not as a routine. It appears, however, that the renograms and the renoscan are here to stay, and with the inevitable improvements will be of routine help. In the renogram, radioactive Hippuran I^{131} is injected intravenously, the drug is excreted immediately and almost in its entirety by the kidney, a scintillation probe is placed over each kidney and the radioactivity reaching and leaving the areas is recorded on separate graphs. Interpretation is based on a quantitative comparison of the two curves as well as the character of the curve produced by the accumulation and excretion of the material. Interpretation is tricky. The renoscan is performed by injecting intravenously Neohydrin tagged with radioactive mercury—chlormerodrin Hg^{203}—this substance is promptly cleared from the blood by the kidney but is not promptly excreted as is Hippuran. It hangs around, so to speak, for a few hours during which time a scan can be made of the kidneys. It will outline the kidney in a fashion, indicate its position, size and areas of loss of function, but it does not give anywhere near as clear-cut a picture as a pyelogram, intravenous or retrograde.

The Brain Scan was introduced over 15 years ago at the Hines V.A. Hospital by Ashkenazy, using the old Geiger counter. It fell into disrepute but has been revived with considerable fan-fare. The scintillation counter and new isotopes have made the brain scan reasonably helpful in the diagnosis of brain lesions, malignant and otherwise. For the present (temporary?) chlormerodrin Hg^{203} is injected intravenously, and the head scanned four to five hours later for increased uptake in the lesion.

The Liver Scan is usually obtained by injecting Rose Bengal tagged with I^{131}. Views are taken both AP and lateral. Carcinomatous metastases must be so large to be recognized on the scan that it affords little clinical help. In amebic abscess it does help to localize the cavity. Aggregates of I^{131} tagged albumin give good liver and spleen scans. Sooner or later good profiles will be obtainable of both. Tectnetium Tc-99M has promise as a good nuclid for both liver and brain scans.

Blood Volume can easily be determined by injecting human serum albumin tagged with I^{131}. Apparati have been devised to simplify the technique and calculations to the point that the procedure can be accomplished by any technician without the use of an isotope laboratory. A blood volume determination adds to but does not replace the value of the hemoglobin and the hematocrit. It is especially valuable on a surgical service, more so

if the surgeon understands its meaning and its limitations—a relatively infrequent set-up.

Polycythemia Vera is easily treated with P^{32}. Control is very good. P^{32} is also an excellent therapeutic agent in chronic leukemia.

Radioactive Gold Au-198 and Radioactive Colloidal Phosphorus P-32, when injected into the peritoneal or pleural cavities affected by carcinomatous effusion, has a tendency to diminish the formation of a fluid. It is doubtful that the trouble and cost is worth the effort.

P-32, given intraveneously localizes in bony metastases and gives some palliation.

The injection of Au-198 into cancer of the prostate and cancer of the cervix carries with it the possibility of so much radiation hazard that it should be confined to highly specialized centers.

In Pernicious Anemia the lack of absorption of Vitamin B-12 can readily be detected if it is tagged with Cobalt-60. The test is quite accurate under all circumstances.

Miscellaneous. Liver function studies by determining directly or indirectly the liver uptake of Rose Bengal I^{131} are as yet not clinically acceptable. Studies in electrolyte distribution are informative. Iron absorption, binding and turnover, can be analyzed clinically by using Fe^{55} and FE^{59}. Red cells tagged with Chromium-51 give an accurate calculation of red cell mass, and can also be used to determine red cell destruction; and if the tagged cells are sensitized they will congregate in the spleen, permitting a good scan.

Some Investigational Activities

The "Gamma or Scintillation Camera" is already in commercial production. This is an expensive ($35,000) piece of electronic machinery to produce an image of the distribution of internal radiation on a film. As yet it is in the experimental stage. When (or if) it is perfected it will replace the "scan."

Whole Body Counting is conducted by inserting an individual into a coffin-like structure containing an array of scintillation counters. It was introduced as a means of calculating body uptake from fall out but obviously has many uses in calculating the whole body content and turnover of many radio-elements other than the normally occuring potassium.

Activation Analysis makes possible the detection of exceedingly small amounts of tracer elements. It has been used to analyze copper and manganese outputs. The method consists of placing the sample into a neutron flux in a nuclear reactor which activates the element to be analyzed to a radioactive isotope that can be easily recognized.

Detection of Occult Bone Metastases by Photoscanning with Radiostrontium. Strontium is similar to calcium and will localize in bone. Radioactive strontium will localize in metastatic lesions in bone and thus occult metastases can be detected more readily than by conventional roentgenography. The method is promising.

The Diagnosis of Pulmonary Embolism by Radioisotope Scanning. Human serum albumin labeled with I^{131} or Cr^{51} can be aggregated into large enough particles to lodge in the pulmonary capillaries and their distribution delineated by scintillation scanning. By this method pulmonary embolism can be visualized in an early stage. It is also applicable in other lesions of the lung.

A Pancreas Scan has been obtained by the localization of methionine in which the sulfur has been replaced by Selenium-75.

Cardiac Output and measurements of coronary flow are possible by isotope techniques, but the techniques are so far inacceptable for clinical use.

Cerebral Circulation Time can be estimated by following a radioactive "bolus" through the brain. Pulmonary Blood Flow is estimated by a somewhat similar means.

An inkling of the inexhaustible ways that isotopes can be used in clinical diagnosis and research can be obtained from the titles of a selected few papers presented (Proceedings Society of Nuclear Medicine, 1964):

Differential Diagnoses of the Megaloblastic Anemias using C-14; The Metabolism of I-131 Insulin in Patients with Diabetes Mellitus; Degradation of C-14 Labeled Thymidine in Man; An Approach to the Detection of Occult Pigmented Melanoma.

These are infinitesimal samples of what is coming!

Speakers Available on Radiation Monitoring Procedures

Starting October 1, a new series of talks on "Radiation Monitoring Systems" will be made available by Nuclear-Chicago Corporation to all county medical societies and major medical centers in Illinois. These talks will be given by technically competent spokesmen of Nuclear-Chicago Corporation, one of the major film badge suppliers in the United States.

Illustrated with color slides, the 30-minute talks will provide the physician with a clear explanation of radiation monitoring procedures necessary to meet the requirements of the Illinois Department of Public Health.



The following questions are answered in the talks:

1. What does a physician have to do to comply with the Illinois Radiation Monitoring Act?
2. How does the Act apply to users of radioisotopes and x-ray users?
3. What are the hazards in working with tracer techniques, isotope therapy, and x-ray machines?
4. What are permissible doses?
5. Who must be monitored?
6. How can monitoring be done?
7. What records must be kept and for how long?
8. How does a film badge service function?
9. What is the cost of monitoring?

If you would like a program to clarify in detail your responsibilities under the Radiation Monitoring Act, write to the Scientific Speakers Bureau, Illinois State Medical Society, 360 North Michigan Avenue, Chicago, 60601.

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'64 Convention Paper

Quality Control in the Physician's Office Laboratory

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A laboratory test has no intrinsic value. It becomes valuable only when the result is correlated with other information to provide a diagnosis. But there are many situations in which laboratory data are meaningful only if we know certain things about how the test was performed. Unless we are aware constantly that errors can occur, we may be misled to the detriment of the patient. Here are two examples involving "simple" tests commonly performed in physicians' offices:

A hemoglobin test is performed on a patient who looks pale and complains of fatigue. The technician reports a hemoglobin level of 11 gms. per cent. After six weeks of iron therapy she is reported to have 10.8 gms. per cent of hemoglobin. There is no evidence of unusual blood loss. Should you do a bone marrow study? If the patient is scheduled for elective surgery should you give her a blood transfusion?

A patient with an active peptic ulcer was seen last week at which time the technician reported that he had an hematocrit of 40 per cent and 16 gms. per cent hemoglobin. Last night he felt weak and was nauseated and sweating. Today the technician reports that his hematocrit is still 40 per cent but his hemoglobin is now 14 gms. per cent. Has he bled?

In both instances failure to detect errors in the laboratory reports can cause confusion and may lead to an erroneous diagnosis and unnecessary studies and treatment. From the time you think of a test to its final effect on the care of the patient, even the simplest laboratory procedure is subject to six kinds of errors:

1. The wrong patient.
2. The wrong specimen.
3. The wrong test.
4. The wrong result.
5. The wrong report.
6. The wrong interpretation.

All can happen at once, but one is enough to make the test worthless. We must guard against each of these hazards, but this presentation is particularly concerned with the fourth hazard, the wrong result. Let us consider, for example, the sources of error in some common hematology tests, to illustrate how many things can go wrong.

Sources of Error in Hematology

Physiologic reaction to the collection of the specimen: An example of this sort of error is the high leukocyte count obtained from a belligerent and frightened child who has to be restrained while the specimen is collected.

Method of sampling: Lange and Palmer[1] have

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shown that the method of collecting capillary blood for hematology tests can introduce a considerable variation when compared with tests made simultaneously on venous blood. They found that massaging the finger reduced counts by 5 per cent. When blood was pressed from an inadequate puncture, counts were from 17.5 per cent to 26 per cent too high. Blood obtained by scarification gave higher counts than specimens from a sharp knife stick.

Preservation of the specimen—Anticoagulant: If venous blood is used for tests the anticoagulant can be a source of errors. Clotting may occur because of insufficient anticoagulant. Fibrin strands, which interfere with sampling, may form because of incomplete mixing with the anticoagulant. Use of the wrong anticoagulant can produce cell distortion which will cause errors in the hematocrit and result in differential smears which are difficult to interpret.

Preservation of the specimen—Container: Problems with the container also can be a source of error before the actual testing is done. A poorly fitted, leaking cap on a vial of hemoglobin diluent can result in a blood dilution other than that for which the photometer is calibrated.

A leaking blood diluting pipette is unlikely to lose blood and diluent in the same proportion, resulting in a grossly erroneous count. Evaporation of diluent from an unused vial will change the dilution ratio as well as the chemical concentration of the solution.

Technical Errors in the Laboratory: Hemoglobin

Instrument Errors: Inaccurate sample pipette calibration can cause large errors. Sunderman and Associates[2] tested 100 Sahli pipettes and found that 59 were within ± 5 per cent of the stated volume. The remaining 41 were outside this limit and varied from −30 per cent to +20 per cent of stated volume. Pipettes of certified accuracy are now available, but if you buy bargains you should be prepared to recalibrate them before they are used.

The volume of diluent for hemoglobin tests must be measured accurately. If a volumetric pipette is used the calibration of the pipette should be verified and the technique must be meticulous for every measurement. Never use a serologic pipette for this purpose. Self-filling pipettes are more convenient but their calibration must be checked also. We have found some to be in error.

Automatic pipetting machines must be calibrated for the proper volume and the calibration should be rechecked with volumetric flasks each day. Pipetting machines may fail to maintain calibration because of insecure volume adjustment, dirt in the valves, or bubbles in the chamber.

Colorimeters and spectrophotometers have several sources of errors. Precalibration at the factory is mentioned only to be condemned. A calibration is valid only for the particular reagents used and the operator doing the tests. The errors of precalibration are increased further by the passage of time. Photocells, exciter lamps and other electrical components age and deteriorate. Calibrations must be rechecked frequently.

An incomplete calibration, produced with a single concentration of a standard, may be valid for that point on the curve but inaccurate elsewhere. Several concentrations of the standard should be used to cover the full range of unknowns to be tested.

An instrument with a scale which is too small makes reading difficult and unreliable. In some parts of the scale a reading error of a single division can alter the hemoglobin report by as much as 1 gm. per cent.

Unstable electrical components can result in erratic readings and significant errors. Marked fluctuation in line voltage can have the same result.

Unmatched cuvettes are another source of error. The length of light path must be the same for all samples.

Dirty cuvettes scatter light and produce false readings. Acid washing may be necessary to remove protein deposits.

Poor standards may invalidate the best efforts at calibration. The best hemoglobin standards are those certified by the College of American Pathologists, but even these can deteriorate on standing.

Personal Errors: Complete mixing of the sample is essential, since only a small aliquot is tested. Too vigorous mixing may cause hemolysis and foaming, both of which lead to errors.

Inaccurate and careless pipetting must be avoided. Failure to wipe blood from the outside of the pipette also can lead to inaccurate results.

Accurate adjustment of the colorimeter is essential for good work. A reading is valid only if the instrument has been carefully set to 100 per cent transmittance or 0 optical density with a fresh reogent flash.

Inaccurate observation of machine readings due to carelessness, fatigue, or bias is another source of random errors. This sort of error is most likely to occur late in the day or when work loads are heavy.

Inaccurate conversion of optical density or per cent transmittance to grams per cent of hemoglobin can invalidate otherwise meticulous work. Errors in recording results on work sheets and in transeribing these to the report forms also should be mentioned.

Erythrocyte and Leukocyte Counts, Hemocytometer Method

Instrument Errors: Inaccurate diluting pipettes can be a source of error here, as in hemoglobinometry. Diluting pipettes have 2 calibrations which must be accurate.

Errors due to inaccurate counting chambers can be avoided by buying only the best quality. A "bargain" may be very costly in terms of accuracy.

Contaminated diluent fluid is another source of error. It is very difficult to distinguish between erythrocytes and yeast cells on a counting chamber.

Irregular cell distribution on the counting chamber may result from incomplete mixing of the diluted sample or improper filling of the chamber. Both can produce counts which are erroneous.

Personal Errors: If counts are made from venous blood the small aliquot to be tested must come from a well mixed sample. Even a few minutes settling can result in serious errors. Inaccurate pipetting of the sample and diluent produces the same problems in cell counting as in hemoglobinometry.

Insufficient shaking of the sample pipette, or shaking by the wrong technique, will fail to produce a homogeneous dilution for counting. Excessive shaking destroys cells. Inaccurate filling of the counting chamber leads to irregular cell distribution.

Inaccurate counting due to carelessness, fatigue or bias, is a hazard that increases with the workload, and with the physicians' demands for an immediate report.

Hemocytometer counts, at best, are not very precise. Berkson, Magath and Hurn[3] found that under ideal conditions an erythrocyte count is accurate only to plus or minus 16 per cent. Leukocyte counts vary by a factor of at least plus or minus 21 per cent. Electronic cell counts can be much more precise, but present many more sources of error. The equipment is expensive and requires careful maintenance.

Hematocrit

While the hematocrit is less complicated than the erythrocyte count, it is subject to error also.

Instrument Errors: It has been shown that errors in microhematocrit tests can be due to variation in caliber of capillary tubes. These tubes cannot be recalibrated, hence the importance of buying only the best quality. Inaccurately calibrated macrohematocrit tubes can be a source of error for this method.

Maximum packing of red cells for uniformly precise hematocrit tests depends upon the amount of centrifugal force and the length of time it is applied. The amount of centrifugal force is determined by the diameter of the centrifuge head and the speed of rotation. Insufficient speed or insufficient running time result in hematocrit readings which are too high.

Loss of part of the specimen due to leaking tube seals constitutes another source of error. If microhematocrit tubes are sealed by fusing the end of the tube with a flame the heat may cause hemolysis resulting in readings which are too low.

A poorly designed micro-tube reader makes it difficult to read the packed cell volume precisely.

Personal errors in doing hematocrit tests are similar to those discussed above, incomplete mixing of the sample, incomplete sealing of the tubes, errors in reading the cell volume, and transcription errors.

Similar lists of sources of error could be compiled for urinalysis and other tests commonly

performed in the physician's office. Since there are so many sources of error in every test, we must be able to detect errors when they occur. This is the purpose of quality control. Quality control is accomplished by a systematic program for the detection and elimination of all factors which may give rise to errors.

Programs of quality control are concerned with three things:

1. Accuracy.
2. Precision.
3. The detection of random errors.

ACCURACY is the closeness with which the average value of a series of tests agrees with the true value. Accuracy depends on careful calibration of instruments, equipment and reagents against valid universal standards.

PRECISION means the closeness with which repeated tests on the same sample agree with each other. Precision depends on the training and skill of the analyst, the care with which she works, and the quality of the instruments and equipment she uses.

RANDOM ERRORS usually are the result of instrument malfunction or personal factors. What can the physician do to detect and eliminate laboratory errors?

Methods for Quality Control in the Office Laboratory

Personnel: The training, experience, skill and temperment of the person performing the tests has a bearing on the reliability of the result. You may be fortunate enough to find a medical technologist who is certified by the Registry of the American Society of Clinical Pathologists, and identified by the title M.T. (A.S.C.P.), but persons with such qualifications are in short supply and the salaries they can obtain are likely to be excessive for an office laboratory. The alternatives are: either train a girl yourself or hire a commercial school graduate.

Before you undertake a training program you should ask yourself if you know enough about the instruments and technical methods to be a competent teacher. Do you have the time to spare?

Students in commercial schools frequently have grossly inadequate "training." Recently we interviewed a graduate of an "academy" for medical and dental assistants who thought she had been trained in office laboratory procedures. During her 4 months at the school she had done 6 venipunctures, 30 erythrocyte and leukocyte counts, 20 hematocrits, 15 hemoglobin tests and 36 differential counts. (If you think this is adequate training you should *not* do laboratory tests in your office.)

Even if you employ a competent technician your personal supervision is essential to good work. If you want high standards of performance you must set these standards, and you should know enough about methods of quality control and provide enough supervision to see that they be maintained.

Equipment: Work of good quality is impossible without quality equipment. Volumetric tests, including hemoglobinometry and blood counts, should never be done without volumetric glassware. If the glassware you buy is not of certified quality you must recalibrate it before use. Instruments must be calibrated with reliable standards and the calibration must be rechecked frequently. The use of a precalibrated instrument is almost certain evidence of poor work.

Even proper calibration does not insure accuracy. In the example, given above, of the patient who failed to respond to iron therapy, the hemoglobinometer had been properly calibrated with a standard equivalent to a 1—250 dilution of whole blood; but her tests were run with a 1—300 dilution. If the proper dilution had been used her true hemoglobin level of 13.2 gms. per cent would have been found. She did not respond to iron because she was not anemic. If she had had a serious reaction to an unnecessary blood transfusion you might have difficulty proving you were not negligent.

Duplicate Tests: Running repeated analyses on the same specimen is an essential part of a program for quality control. The accumulation of 10 or more sets of duplicate tests provides data for the calculation of the standard deviation by the formula:

$$\text{Standard Deviation} = \pm\sqrt{\frac{(\text{Diff. between Duplicates})^2}{2 \times \text{Number of Pairs} \quad (\text{Youden}^4.)}}$$

This is a mathmetical statement of the variability of your measurements and is a good way of expressing precision. In our own hematology

laboratory we test the first 10 specimens each day in duplicate and keep a running graph of each day's standard deviation for hemoglobins and for red and white counts. Such a program would place a considerable burden on the physician's office laboratory, but the duplicate testing of even one specimen each day permits the calculation of standard deviation every two weeks.

Knowledge of the standard deviation value for each quantitative test you do is essential to the interpretation of test results. For example, a change from one hemoglobin test to another of 1 gm. per cent is indicative of an actual change in the patient's condition only if you know that the standard deviation for hemoglobin is less than 0.3 gms. per cent.

Duplicate testing also can provide a necessary check on the accuracy of calibration. A duplicate sample sent to a laboratory with a comprehensive quality control program will provide evidence that results in your own laboratory are reliable, or indicate which methods need study and revision. One valuable key to locating such a laboratory is the Inspection and Accreditation Program of the College of American Pathologists now being implemented. If an aliquot of at least one specimen you have tested is sent each week to such a laboratory you will have added a valuable component to your quality control program at small cost.

Another essential part of a quality control program is the retesting of specimens by alternative methods to confirm questionable results with "screening" tests. This applies, for example, to urine specimens tested with dip sticks. Test methods which are good for screening may be too sensitive or may give false positive reaction. Any urine giving a positive reaction for sugar should be rechecked with another method, preferably one involving the reduction of a copper reagent. Every positive urine albumin test should be rechecked with sulfosalicylic acid or with heat and acetic acid.

Correlation Between Tests: The correlation between tests which are quantitatively or qualitatively related provides a valuable cross-check on accuracy and precision and is particularly helpful in detecting random errors. The routine complete blood count contains quantitatively related tests and the routine calculation of mean corpuscular constants provides a numerical expression of the relationships between these pairs of tests. The two most valuable corpuscular constants for this purpose are the Mean Corpuscular Hemoglobin and the Mean Corpuscular Hemoglobin Concentration. If you are doing red cell counts and hemoglobin determinations in your laboratory, the Mean Corpuscular Hemoglobin is calculated by the formula:

$$\text{MCH} = \frac{\text{Hbg in gms. \% x 10}}{\text{Rbc in millions/cmm.}}$$

For hematocrit determinations and hemoglobin tests, the Mean Corpuscular Hemoglobin Concentration is calculated by the formula:

$$\text{MCHC} = \frac{\text{Hbg in gms. \% x 100}}{\text{Vol. Packed Cells/100 ml.}}$$

These cell indices can be calculated very quickly with a slide rule or with special calculators constructed for this purpose. The normal ranges are: MCH 27 to 32 micro micrograms, MCHC 31 per cent to 36 per cent.

Detection of Random Errors

If the erythrocytes on the stained differential smear appear normal the MCH or MCHC should be within the normal range. If both the erythrocyte count, or hematocrit, and hemoglobin are repeated whenever the cell indices are outside the normal range and the erythrocyte morphology is normal very few random errors of significant magnitude will be missed. In the example, given above, of the ulcer patient with possible bleeding, calculation of MCHC from the data obtained with the first tests yields a value of 40 per cent. Such a result is fantastic since 36 per cent is the maximum possible concentration. This indicates that an error was made in either the hematocrit tests or hemoglobin measurement. Thus the tests are worthless and provide no basis for comparison with the current tests which yield a value for MCHC of 35 per cent. A program for quality control can avoid such clinical dilemmas.

The statistical analysis of a series of mean corpuscular constants from tests on normal persons also provides useful information.

Verification of Accuracy: The average value for each mean corpuscular constant, from a series of accurate tests on blood from normal per-

sons, should be near the center of the normal range. This is a cross-check on accuracy and any consistent deviation is an indication to recheck calibration. In our laboratory we calculate the average value for MCH on all tests on "normal" blood specimens each day. The average value and range of daily average values for MCH from 199 series of routine tests are summarized in Table 1.

TABLE 1

AVERAGE MEAN CORPUSCULAR HEMOGLOBIN (MCH) FOR ALL "NORMAL" BLOOD SPECIMENS TESTED ON 199 CONSECUTIVE WORKING DAYS

Average MCH for the series	29.4 mmg.
Range of daily average values for the series	28.3-30.7 mmg.
Standard deviation of daily averages for the series	±0.5 mmg.
Range for ± 2 S.D.	28.4-30.5 mmg.

Verification of Precision: Random errors in performing tests on normal blood will tend to produce an abnormally wide range of mean corpuscular constants. Assuming that specimens of normal blood constitute a homogenous population with respect to MCH values, the standard deviation for each day's series of tests can be calculated by the formula:

$$\text{S.D.} = \pm\sqrt{\frac{\text{Sum (differences from the mean}^2)}{\text{Number of measurements—1}}}$$

(Hoffman[5])

This standard deviation is a further check on the precision with which routine tests are performed.

Values for standard deviation of the MCH from the same 199 daily series of routine tests are listed in Table 2.

TABLE 2

STANDARD DEVIATIONS (S.D.) OF MEAN CORPUSCULAR HEMOGLOBIN (MCH) FOR EACH DAY'S SERIES OF TESTS ON "NORMAL" BLOOD FROM 199 CONSECUTIVE WORKING DAYS

Average S.D. of MCH for the series	±1.3 mmg.
Range for the series	±0.8 to ±1.7 mmg.
S.D. above ±1.5 mmg.	18 days (9%)
S.D. above ±1.6 mmg.	7 days (3.5%)

Correlation between qualitatively related tests in urinalysis also is a useful part of a quality control program. For example, tests should be repeated if casts are reported, but no albumin. A low urine specific gravity with 4+ sugar should suggest the need for rechecking these tests. The simple lignin test can help to differentiate between oxalate and sulfa crystals in the urine sediment.

Correlation With Clinical Information: A very important part of any quality control program involves the correlation between test results and the other information about the patient. If a test result does not "fit" the test should be repeated before any attempt is made to interpret it.

The physician who has laboratory tests performed in his office must be skeptical and critical. Laboratory work of good quality results from constant vigilance. This is a responsibility he cannot delegate even to a trained technologist.

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Non-Epidemic Staphylococci: An Environmental Survey

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A growing interest in the prevention and management of hospital-acquired staphylococcal sepis has inspired numerous clinical investigations of these problems during recent years. Many reports about staphylococcal epidemics have dealt with the people aspect of the hospital environment, especially in terms of staphylococcal epidemics.[1,2] Although investigations of inanimate hospital environment have been reported, the studies have usually been limited to air sampling, epidemic situations, or specific objects such as mattresses or floors.[3-5] Thus, it is the purpose of the present communication to report the findings of a general survey of staphylococci in relation to the inanimate hospital environment in a hospital where no epidemic exists. In addition, an associated study of expectant mothers and newborn infants implicating environmental-patient transmission of staphylococci will be reported. The investigation was undertaken during the summer months at Blessing Hospital, a 196-bed general hospital in Quincy, Illinois.

Procedure

On the premises that 1) uniform sampling of a small surface area of all typical inanimate objects in all hospital rooms would provide an index to the relative contamination of these objects with staphylococci, and 2) that the incidence of any type of staphylococci on an object indicates a possible or actual reservoir for pathogenic strains, the following procedures were undertaken.

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Over 3,250 individual cultures were studied following the systematic sampling of about 19 inanimate objects in each of the hospital rooms. All cultures were made by swabbing one square inch of surface of the object with a sterile, moistened, cotton-tipped applicator, and by incubating inoculated Staphylococcus Medium #110 (Difco) at 38° C for 48 hours. Because of the mass production of cultures, colonies of staphylococci were periodically checked by Gram staining; indeed, very few contaminants were noted on the selective staphylococcus medium. It was impossible to carry out phage typing and coagulase testing on all the cultures, but the medium permitted differentiation of non-pathogenic and pathogenic staphylococci by nature of chromogenic properties of the latter.

The articles selected for culturing, as indicated in Table 1, were chosen on the basis of either frequent contact with patients or visitors, or lack of attention in the housekeeping procedure. In the cases of the laundry room, cafeteria, surgical rooms, etc., equivalent objects with the above characteristics were selected for culture.

Results

General Hospital Environment: A comparative summary of the incidence of staphylococci on the inanimate objects cultured is illustrated in Table 1. This analysis, based on the study of 3,250 individual cultures, indicates a wide range of relative contanimation of objects. Under the conditions of this study, and in spite of frequent cleaning, the objects aligned horizontally in the environment and in frequent human contact were incriminated as the most suitable reservoirs of staphylococci in the hospital environment.

Surgical Ward: The incidence of staphylococ-

ci was considerably lower in the surgical ward than in the general hospital environment. A comparison of the relative contamination of rooms based upon the proportion of positive staphylococcal cultures taken in each room revealed that 60 per cent of the surgical rooms had a low incidence of staphylococci (10-40 per cent positive objects per room) in contrast to only 41 per cent of the rooms in the entire hospital with a similar low incidence. In the surgical ward it was evident that a high incidence of staphylococci (61-85 per cent positive objects per room) occurred in rooms of personnel traffic, i. e., doctors' lounge and dressing room, nurses' room, surgical work room, anesthesia room, and recovery room. All major operating rooms and the scrub room were characterized by a low occurrence of staphylococci (10-40 per cent positive objects per room).

TABLE 1

Analysis of Objects Cultured for Staphylococci

Object	% of Objects Yielding Staphylococci	Alignment in Environment	Cleaning Attention	Direct Human Contact
Wall	10	Vertical	Seldom	No
Windowshade	15	Vertical	Seldom	Yes
Headboard of Bed	16	Vertical	Seldom	Yes
Mattress	18	Horizontal (covered)	Seldom	No
Curtain Divider	19	Vertical	Seldom	No
Drapes	23	Vertical	Seldom	No
Pillow	30	Horizontal	Seldom	Yes
Bedpan	31	Horizontal (covered)	Often	Yes
Main Light Switch	35	Slanting	Seldom	Yes
Bed Lamp Switch	36	Slanting	Seldom	Yes
Wastebasket	43	Vertical	Seldom	No
Toilet Seat	57	Horizontal	Often	Yes
Food Tray	58	Horizontal	Often	Yes
Nightstand	66	Horizontal	Often	Yes
Lavatory	67	Horizontal	Often	Yes
Chair Seat	70	Horizontal	Seldom	Yes
Floor (Traffic)	85	Horizontal	Often	Yes
Floor (Corner)	85	Horizontal	Often	Yes
24-Hr. Air Fallout	92	Horizontal	**	Yes

Obstetrical Ward: In an associated study, nose, throat, and perineal cultures were taken on expectant mothers at admission to and discharge from the hospital, and nose, throat, and abdominal skin cultures were taken on their newborn babies at discharge from the hospital. It was evident in this study of 1197 individual cultures that the hospital environment was involved in the transmission of staphylococci to the patients. Although 38 per cent of 180 expectant mothers empirically harbored coagulase-positive (fresh human serum) staphylococci in the nose, throat, or on the perineum at admission, 54 per cent harbored coagulase-positive staphylococci at discharge from the hospital. Also, 37 per cent of the 107 newborn infants examined acquired coagulose-positive staphylococci before discharge. It is of interest that in a study of 40 newborn infants and their mothers, 19 of the infants acquired coagulase-positive staphylococci although their mothers did not demonstrate coagulase-positive staphylococci under the given conditions. From this associated investigation it is possible to conclude that both newborn infants and their mothers acquire coagulase-positive staphylococci from the hospital environment. However, it can only be ascertained by phage typing whether the inanimate aspect and/or the personnel aspect of the hospital environment is responsible for cross-infection in this case.

Discussion

It is noteworthy that in Table 1, five of the six objects in the slightly contaminated group (10-35 per cent) are aligned vertically in the environment. It might be thought that the relatively low incidence of staphylococci on these articles is due to the lack of dust, which has a proclivity to settle on horizontal surfaces. Walter[6] has reported that organisms associated with staphylococcal infections are found in rapidly settling particles such as dust and droplets. However, in the present investigation the wall, windowshade, curtain divider, and drapes were cleaned relatively seldom in the housekeeping procedure, and the swabbing of a windowshade or the shaking of a drape readily indicated the presence of dust. Thus, question is raised concerning the nature of the correlation of dust and staphylococci. At any rate, an examination of the six objects in the highly contaminated group (66-92 per cent) reveals that these articles are aligned horizontally in the environment, are in frequent contact with patients and visitors, and are cleaned often in the housekeeping procedure. The present study indicts the hospital floors as the primary reservoir of staphylococci, thereby substantiating the work of Walter[6] in

regard to floors. Not only are the floors the largest and lowest horizontal surface in the hospital room, but they are continually subject to human contact as visitors, hospital personnel, and ambulatory patients walk about the hospital. It is not the purpose of the present paper to discuss housekeeping, but it must be mentioned that judicious housekeeping is certainly the major factor in controlling staphylococci in the inanimate hospital environment. Although the floors were generally wet-washed with a detergent once a day, the incidence of staphylococci in the center of activity on the floors was reduced from 85 per cent to 59 per cent when additional male help was hired for cleaning and when a detergent solution with optimal cleansing and germicidal properties (Tergisyl) was utilized. Similarly, the incidence was decreased at the corners of the floor from 85 per cent to 45 per cent positive cultures. The fact that the operating rooms have a low occurrence of staphylococci is undoubtedly due to the excellent, frequent, scrubbing of the objects in these rooms, and to the low amount of traffic therein.

The present investigation demonstrated a 38 per cent incidence of coagulase-positive staphylococci on expectant mothers who were cultured (nose, throat, and perineum) at admission to the hospital. This can be compared to Millian's et al[7] record of 37.5 per cent white, male and female, non-hospitalized nasal carriers of coagulase-positive staphylococci, to Lind, Sullivan, and Boggs'[8] record of 25 per cent incidence of nasal carriers of coagulase-positive staphylococci from 300 personnel outside the hospital, and to Poth, Lepper, and Smith's[9] account of 38 per cent incidence of virulent strains of staphylococci in the anterior nares of 667 employees in a Wisconsin hospital. Thus, the present study, which is supported by the work of other investigators, also reveals an inevitable route by which staphylococci are brought into the hospital environment.

Summary

An environmental survey of staphylococci has been undertaken in a general hospital in which no epidemic exists. Nineteen inanimate objects were systematically cultured in each hospital room, and associated studies of expectant mothers and newborn infants were made; in all, about 4,500 individual cultures were studied. The ubiquity of staphylococci has been demonstarted, with the floors and other objects of human contact and horizontal alignment yielding the highest incidence of staphylococci. As demonstrated in the surgical ward and in the hospital as a whole, increased traffic increases the incidence of staphylococci on inanimate objects, and improved housekeeping methods greatly reduce the incidence of staphylococci on the floors and objects in the rooms. Associated studies of expectant mothers and newborn infants indicated that 38 per cent of 180 expectant mothers brought exogenous, coagulase-positive staphylococci into the hospital environment, and that 16 per cent of 180 mothers and 48 per cent of 40 infants acquired coagulase-positive staphylococci of probable hospital origin. It was found that 37 per cent of 107 newborn infants acquired coagulase-positive staphylococci of maternal or hospital origin according to cultures of the anterior nares, throat, and abdominal skin.

Acknowledgement

The authors express their appreciation to Miss Jan Caldwell for her technical assistance.

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Granulomatous Angiitis of the Central Nervous System

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The vessels of the central nervous system may be affected by a form of granulomatous inflammation which generally leads to death in a short period of time. This condition is uncommon and has been reported under other designations. The case to be reported is of unusual interest for two principal reasons: first, the clinical state was that of a rapidly fatal neurologic disease which simulated a ruptured berry aneurysm; second, the histological changes in the nervous system were those of a granulomatous angiitis. An analysis of the findings in this case, together with a review of the few reported instances of granulomatous angiitis studied pathologically, permit certain conclusions concerning the relationship of granulomatous angiitis and infectious granulomas.

Case Report

The patient was a 45-year-old Negro male with a 6-month history of headaches and personality changes, becoming more severe the week before admission. On July 7, 1962, one week prior to admission, he experienced severe progressive biparietal headaches followed by vomiting, coma and cardiac arrest. He was resuscitated by closed cardiac massage in the emergency room. The past history was essentially unremarkable, with only mild alcohol intake.

Physical examination revealed a well developed, well nourished, deeply comatose male. The blood pressure was 120/70 mm./Hg. with intravenous Levophed running, and temperature 95° F. The pupils were fixed and asymmetrical, the right measuring 0.4 cm. and the left 0.2 cm. in diameter. There was a flaccid quadriplegia with no pathological reflexes. The corneal, abdominal, cremasteric and deep tendon reflexes were all absent. A spinal puncture revealed bloody fluid under increased pressure. The clinical impression was a ruptured berry aneurysm. X-ray of the chest showed a density in the right upper lobe which was interpreted as an aspiration pneumonia. EKG showed a right bundle branch block. The patient was maintained on Bennet positive respirator and 6 ampules of intravenous Levophed. A tracheostomy was performed, but he remained in poor condition and expired six hours after admission.

Laboratory data revealed: hemoglobin 17.7 gm.; hematocrit 55; serum glucose 274 mg. % (intravenous fluids running); serum urea nitrogen 15 mg. %; chloride 97 mEq.; serum Na 143 mEq.; serum K 8.3 mEq.; serum pH 7.05.

Pathological Findings. The major pathological findings were confined to the lungs, kidneys, lymph nodes and central nervous system.

Both lungs together weighed 900 grams and showed a retracted, somewhat thickened pleura with marginal vesicular and bullous emphysema. The cut surface was reddish-gray in color and edematous. The tracheobronchial lymph nodes were slightly enlarged and soft, some being focally replaced by grayish-white, moderately firm tissue.

The kidneys together weighed 300 grams. The cortical surfaces were smooth and on section the cortex and medulla displayed several slightly depressed areas of grayish-white soft tissue measuring up to 1.5 cm. in diameter.

The brain was roughly of normal size. The hemispheres were symmetrical with slight narrowing of the sulci and flattening of the gyri. The leptomeninges showed areas of subarachnoid hemorrhage in the right and left frontoparietal lobes and superior and inferior surfaces of the cerebellum. Coronal sections through the cerebrum revealed two areas of intracerebral hemorrhage; one located in the left parietal lobe involving the cortex and white matter measured 2.5x1.4 cm. and the other involving the right parietal lobe measured 3x1.3 cm. The brain stem exhibited areas of fresh hemorrhage, measuring 4x1.5 cm., which extended to the midline and had partially ruptured into the subarachnoid space of the right cerebellar hemisphere.

Histological examination of the lungs revealed fibrous thickening of the pleura and scattered areas of emphysema. The alveoli contained edema fluid and histiocytes loaded with hemosiderin and anthracotic pigment. There were small localized areas of bronchopneumonia, thickening of the blood vessels, a few recent and organized fibrin thromboemboli and a few isolated small groups

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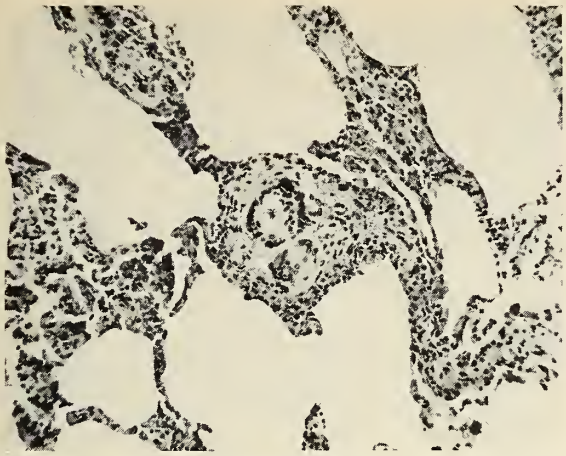


Figure 1. Giant cell granuloma in lung with asteroid inclusion body in cytoplasm of one of the giant cells. Hematoxylin and eosin stain, x150.

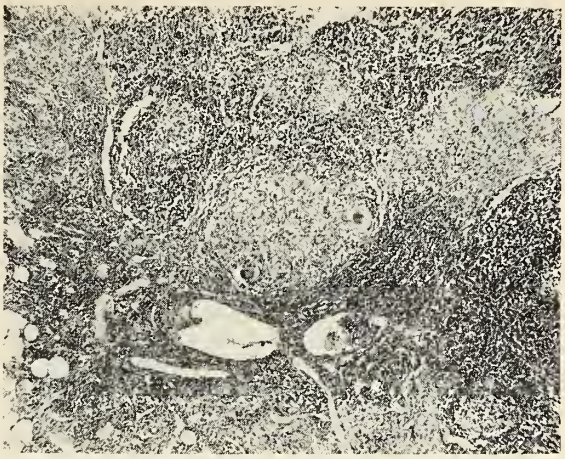


Figure 2. Lymph node showing giant cell granulomas. Hematoxylin and eosin stain, x60.

of multinucleated giant cells showing clear vacuoles in their cytoplasm and an asteroid inclusion body (Fig. 1). On one occasion the giant cells were seen forming part of a small perivascular non-caseating granuloma.

The lymph nodes revealed many circumscribed and confluent non-caseating granulomas containing numerous multinucleated giant cells of the Langhans and foreign body type, the latter showing ingested lipid material (Fig. 2).

In the cortex and medulla of the kidneys there were large confluent and circumscribed granulomas containing a number of large multinucleated giant cells whose nuclei were centrally or peripherally located. There were no distinct areas of caseous necrosis and only small areas of central necrosis in a few of the granulomas. The cortex, and to a lesser extent the medulla, showed areas of fibrosis infiltrated by lymphocytes and plasma cells. Additional findings were hyalinized glomeruli, periglomerular fibrosis, atrophic tubules and medium-sized arteries and arterioles with thickened hyalinized walls. A few of the convoluted tubules revealed calcium concretions and hemoglobin casts in their lumens (Fig. 3).

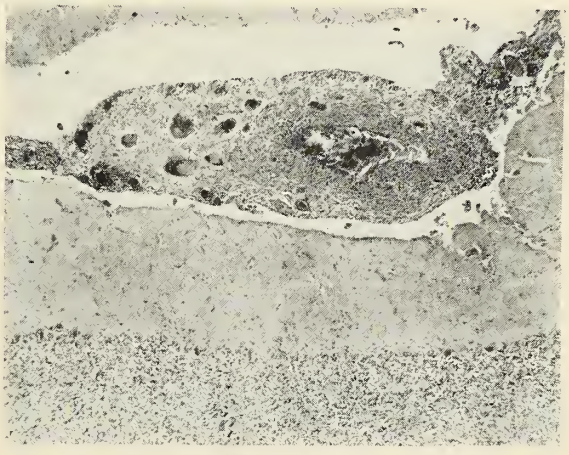
The muscularis of the stomach was infiltrated by numerous foci of polymorphonuclear leukocytes; the liver showed a small non-caseating epithelioid granuloma.

The central nervous system revealed focal inflammatory vascular lesions in the brain and leptomeninges with the latter being more severely affected. These lesions involved arteries and veins (the former more frequently) and were characterized by a diffuse accumulation of large mononuclear cells and many multinucleated giant cells, predominantly of the foreign body type but some characteristically Langhans in type. There were no eosinophils. These cells were present for the most part in the adventitial tissue and perivascular spaces. Although the media was not spared, it was involved to a lesser degree. The vascular lesions were numerous and present in every brain section examined. No vascular changes such as those seen in the brain were present in sections from other viscera. The lumens

Figure 3. Kidney showing giant cell granulomas. Note confluence and absence of necrosis. Hematoxylin and eosin stain, x60.



Figure 4. Large leptomeningeal vessel in sulcus of cerebellum with granulomatous changes in all layers of wall. Hematoxylin and eosin stain, x60.



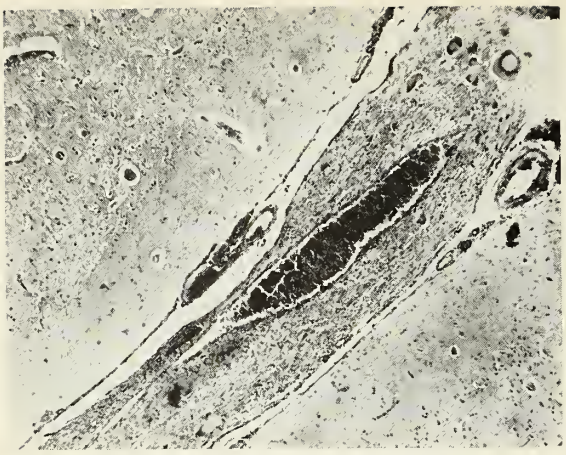


Figure 5. Granulomatous changes evident in large leptomeningeal cerebral artery. Note absence of leptomeningitis. Hematoxylin and eosin stain, x60.



Figure 6. Granuloma in basis pontis unrelated to blood vessels. Hematoxylin and eosin stain, x150.

were narrowed, in some cases markedly, and this was particularly true of the smaller vessels. The vascular changes were present primarily in the subarachnoid space of the cerebrum and cerebellum (Figs. 4 and 5) and, to a lesser extent, within the neural parenchyma. In the latter the tendency was to affect smaller blood vessels and to show small granulomas unrelated to blood vessels (Figs. 6 and 7). At times the granulomas would involve two blood vessels simultaneously. One of the blood vessels affected by the granuloma in an area of subarachnoid hemorrhage showed at one end a very thinned wall which was believed to represent the point of bleeding (Fig. 8). The leptomeninges were fibrotic and infiltrated by chronic inflammatory cells, but there was no leptomeningitis. The subarachnoid space, cerebral and cerebellar parenchyma showed large areas of fresh hemorrhage accompanied in the latter by areas of myelin loss, disrupture of the neural parenchyma and numerous ischemic neurons.

Postmortem cultures of the kidneys and brain tissue showed no pathological fungi or acid-fast bacilli. Special stains for fungi (Gomori methenamine silver), for acid-fast bacilli (Ziehl-Nielsen) and for spirochetes (Kanzler silver) all were negative.

Comment

The morphological changes in our case were somewhat different in the central nervous system as compared to the other organs. In the brain the granulomas were very numerous, many being present in every section examined. Confluence of the lesions was not infrequently observed. The granulomas contained lymphocytes, large mononuclear cells, a few polymorphonuclear leukocytes, but no eosinophils. There were many multinucleated giant cells of both the foreign body and Langhans type, as well as many fibroblasts. The lesions had a tendency to involve the entire thickness of the

Figure 7. Granulomas involving wall and perivascular connective tissue of small vessels in white matter of brain. Hematoxylin and eosin stain, x150.

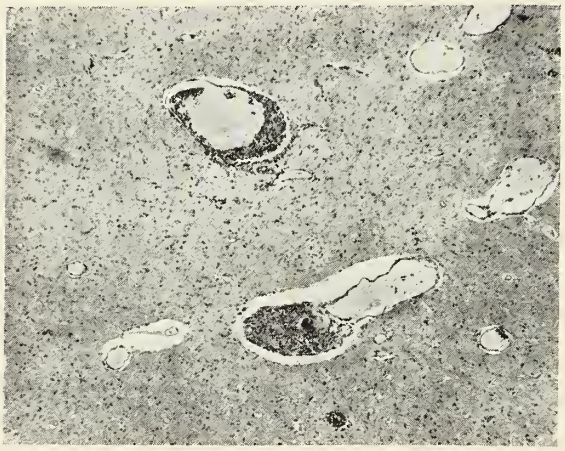


Figure 8. Subarachnoid cerebellar blood vessel with granulomatous inflammation involving wall. Note at one end the markedly thinned vessel wall. Hematoxylin and eosin, x30.



vessel walls, although in a similar case reported by Cravioto and Feigin[1] the intimal and adventitial tissues were often more severely affected than the media which was frequently spared. In one of their cases the process was confined to the intima of major vessels where it formed a sharply localized projection into the lumen, causing narrowing. Arteries and veins both were involved, the former more commonly. Generally the smaller and medium-sized intracerebral and leptomeningeal vessels were affected. The wall of one of the implicated blood vessels (artery) near an area of subarachnoid hemorrhage was markedly thinned at one point. It is not surprising that walls of vessels damaged as severely as those in our case are no longer capable of adjusting to the changing demands of blood supply, and this failure is liable to bring about serious cerebral damage. It is believed that probably this and other similarly affected blood vessels were the cause of the fatal cerebral hemorrhage. The lumens of many blood vessels were markedly narrowed though thrombotic occlusion was not observed. A few small granulomas composed of epithelioid and multinucleated giant cells unrelated to blood vessels were seen involving the cerebral white matter, the hypothalamus, the granular layer of the cerebellum and the basis pontis. The cerebrum and cerebellum disclosed large areas of subarachnoid and parenchymal hemorrhage with rarefaction and ischemic necrosis of the adjacent neural substance.

Vascular lesions such as those in the brain were not present in the remainder of the organs which showed different morphological changes. These organs revealed either no discernible morphological histopathological changes or were characterized by epithelioid granulomas which were almost exclusively unrelated to blood vessels. The granulomas were found primarily in the lymph nodes and kidneys. They appeared to be well circumscribed or confluent, containing numerous multinucleated giant cells (at times extremely large) with occasional rare central areas of necrosis. In the lungs the changes were less marked, with a few isolated small perivascular granulomas composed of epithelioid and multinucleated giant cells, one of which contained an asteroid inclusion body in the cytoplasm. None of the vessels in the remainder of the viscera showed granulomas similar to those described in the brain.

This case will emphasize that granulomatous angiitis is not a disease confined primarily to the cerebral blood vessels, as were the two cases reported by Budzilovich *et al.*[6] and four of the eight cases reviewed by Cravioto and Feigin,[1] including a case of their own.

It is easy to understand how an incomplete picture of a similar case would be obtained if an autopsy were confined only to the central nervous system or not including examination of the cranial cavity, with a completely different diagnosis being entertained.

In a small proportion of patients with periarteritis nodosa, the vessels of the central nervous system alter as do other organs and cause hemorrhage and/or ischemic changes in the brain with neurologic signs and symptoms. It may be distinguished by the presence of fibrinoid or hyaline necrosis of the media, destruction of all coats by inflammatory cells with a variable number of eosinophilic leukocytes. Temporal arteritis (giant cell arteritis) is distinguished by being a relatively benign condition of elderly people with a tendency to involve, for the most part, the temporal arteries and other large arteries in the body. The internal elastica lamina and media are always severely damaged. The cerebral vessels are rarely involved and no granulomas are found elsewhere in the body. Most other vascular processes are less likely than the entity being discussed.

In recent and older reports of sarcoidosis affecting the central nervous system,[2-5] emphasis has been placed on the association of granulomas with blood vessels of all sizes. More frequently the granulomas were found in the adventitia of the blood vessels, but occasionally the media and intima were involved as well. The affinity of the sarcoid lesions in general for the walls of the blood vessels seems more frequent in the central nervous system where it was found virtually in all instances in which careful histologic examination was made.[3] A somewhat striking similarity is present between our case and the case reported by Meyer *et al.*[4] under the name of granulomatous angiitis of the meninges produced by sarcoidosis.

The pathogenesis of this condition is obscure. Hypertension is not clearly a factor, nor is there

clinical evidence of an allergic background or hypersensitive states resulting from therapy with many drugs in most cases. Neither bacteria nor fungi have been isolated in life or by staining procedures in the autopsy material. Nevertheless, the granulomas morphologically appear to be of infectious nature and not unlikely at all to be a manifestation of sarcoidosis, even though we do not have sufficient evidence to support such a diagnosis. Granulomatous angiitis in the central nervous system has been stressed in documented cases of sarcoidosis.[5]

Clinically the disease is characterized by signs and symptoms referable to the nervous system, even in instances in which significant involvement of other organs was present. The neurological changes are generalized and may produce, as in our case, a fatal intracerebral hemorrhage clinically indistinguishable from a ruptured berry aneurysm.

Summary

A case of granulomatous angiitis is reported in which changes were present in both the central nervous system and the rest of the viscera. In the brain the changes consisted primarily of a granulomatous inflammation involving the entire wall of arteries and veins. One or more such affected vessels led to the fatal intracerebral hemorrhage. The disease is systemic and believed to be of infectious nature.

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Enzymes in Mental Retardation

Albert R. Rosanova, M.D., Henry Neimeyer, M.D., Theodore Compall, M.D.,

and Albert Stephan Michaelson, Ph.D., *Chicago, Illinois*

(Part II of the Report)

Part II marks the conclusion of this report. Its purpose is to explore the roles enzymes play in producing—or preventing—those metabolic disturbances which are associated with mental retardation. Part I—which appeared in the July issue of IMJ discussed conditions caused by faulty action of enzymes on proteins or amino acids. Part II discusses conditions caused by faulty action of enzymes on carbohydrates; enzymes which have faulty action on lipoid materials; and miscellaneous enzymes and substrates—The Authors.

Conditions Caused by Faulty Action of Enzymes on Carbohydrates

Galactosemia

Galactosemia is a metabolic disorder in which the body cannot convert galactose to glucose.

The infant appears normal at birth, but several days after feeding is begun he loses weight, refuses part of the feedings, vomits, and frequently becomes jaundiced. The liver becomes enlarged. Cataracts are an early finding. The child becomes mentally retarded.

There is an increase of galactose in the blood and urine. Albuminuria is present. Anderson, Kalchkar, Kurahashi and Isselbacher[32] showed the absence of an enzyme, phosphogalactose-uridyl transferase which is responsible for making galactose-1-phosphate into glucose-1-phosphate in the erythrocytes. This disease should be diagnosed as early as possible in the neonatal period—before permanent damage is done. All lactose-containing food should be withdrawn. When milk substitutes are used, vitamin B_6 should be supplemented.

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Patients do very well when galactose is withheld from their diets. This indicates that the absence of phospho-galactose-uridyl transferase does not in itself impair the metabolic functions of the tissues. Since symptoms of galactosemia appear only when galactose is ingested—and since galactose itself is not toxic in normal individuals—and, finally, since galactose-1-phosphate accumulates to a considerable extent in the red cells of galactosemia patients—it is therefore reasonable to assume that galactose-1-phosphate is responsible for the toxic effect.

Posternack and Rosselet[33] showed that phosphoglucomutase converts glucose-1-phosphate to glucose-6-phosphate, and galactose-1-phosphate into galactose-6-phosphate. The latter reaction takes place at a rate of about 1/400th that of the former. This slow conversion in the presence of excess amounts of galactose-1-phosphate causes many enzyme molecules to be—at any one time—without a phosphate group on its active surface. This is because the first step of phosphoglucomutase is to transfer from its active surface its only phosphate group to a carbon 6 of galactose-1-phosphate. In the next step the enzyme proceeds to replace the lost phosphate group by detaching the phosphate from carbon 1 of galactose-1, 6-diphosphate to yield galactose-6-phosphate, and at the same time recovering the phosphate group to its active site; and is, thus, ready for another run of activity.

However, since the reaction rate is 1/400th that of the transformation of glucose-1-phosphate to glucose-6-phosphate, many of the molecules would, at any one time, be without a phosphate group on their active surface. This makes galactose-1-phosphate a trapping agent for the phosphate of the enzyme phosphoglucomutase. The dephosphorylated enzyme is inactive towards glucose-1-phosphate, and in other syntheses of carbohydrates, nucleic acids

and mucopolysaccharides.

Sidbury[34] using rabbit enzyme, showed that about one one-hundredth of the concentration of galactose-1-phosphate, obtained in the red cells of galactosemic patients, sufficed to inhibit the activity of phosphoglucomutase about 80 per cent when tested in vitro. This is a high degree of inhibition for such an important enzyme as phosphoglucomutase. It could well explain why the galactose-1-phosphate accumulation in galactosemic patients produces mental deficiency, liver cirrhosis and jaundice, cataracts, kidney tubule damage with albuminuria, and aminoaciduria. As a matter of fact, this inhibition slows the total body growth.

In summary, the absence of the enzyme phospho-galactose-uridyl transferase is not detrimental in itself as long as galactose is withheld from the patient. When galactose is ingested, galactose-1-phosphate accumulates in great amounts in tissue cells. This inhibits phosphoglucomutase activity by trapping the essential active phosphate group of the enzyme. Now, since phosphoglucomutase cannot convert glucose-1-phosphate into glucose-6-phosphate (a very important step in energy metabolism), and none of the syntheses of carbohydrates, nucleic acids, and mucopoly-saccharides can take place, the reasons for the widespread symptoms in this disease become apparent.

Glycogen Storage Disease (Von Gierke's[35] disease)

Mental retardation develops in some cases of Von Gierke's disease, but, this is considered most likely to be caused by an insufficient supply of glucose to the brain. This syndrome appears in infancy. It is characterized by a progressive enlargement of the liver and kidneys, hypoglycemia with convulsions, ketosis, and hyperlipemia. The child's growth is retarded. There is an abnormal response to the glucose tolerance test. Also, there is a flat serum glucose response to glucagon or epinephrine injections, instead of the normal hyperglycemic response to these injections.

Usually, the first signs are episodes of staring and seizures. Later, fatigue, weakness, flushing, sweating, speech and visual disturbances, incoordination, tremor, syncope and coma manifest themselves. Treatment is frequent feedings with a high protein diet. ACTH injections have helped, indicating that there may be an associated adrenal cortical hypofunction. Steroids will also elevate the blood glucose.

There is a marked deficiency of hepatic and renal glucose-6-phosphatase in this condition. Glucose-6-phosphatase is responsible for the dephosphorylation of glucose-6-phosphatase to glucose and is normally found only in the liver and kidneys. Glucose diffuses freely across cell membranes whereas glucose-6-phosphate does not. Therefore, this final step is necessary in order to get the glucose into the circulation when the glycogen in the liver is called upon as a source for the glucose of the blood.

Idiopathic (Functional) Hypoglycemia[36]

The symptoms of idiopathic hypoglycemia are almost the same as those in Von Gierke's disease. In idiopathic hypoglycemia, however, there is no enlarged liver or kidneys, and the fasting blood sugar is normal. *However, the blood sugar does go low at the time of symptoms!* Glucose tolerance tests are helpful in establishing the diagnosis. Treatment is the same as in Von Gierke's disease.

Gargoylism (Hurler-Pflaundler Syndrome)[37]

There are two forms of gargoylism: (1) An infantile form with definite moderate to severe mental retardation, and (2) a juvenile form which is not accompanied by retardation.

The patient with gargoylism presents a striking appearance, with a large head and deformed skull that appears to be planted directly on the shoulders. The grotesque skeletal deformities give it the name gargoylism. X-rays are diagnostic. The bones have an increased density. The ribs are spatula-like. The small vertebrae are concave anteriorly. Phalanges are widened and irregular in outline, and the epiphysial ends of the bones are irregular. The sella turcica may be enlarged.

The cornea is cloudy. The liver, spleen, and often the heart are enlarged. Paroxysmal attacks of dyspnea, cyanosis and dependent edema are common. The stature is short, with flexed hands. Often there is a moderate flexion deformity of the elbows, hips and knees. Mild kyphosis of the lower spine may be present. The

abdomen is prominent, with a large, palpable liver.

Histologically, the epithelial cytoplasm of the liver, pituitary gland, reticulo-endothelial cells, and mesodermal connective tissue cells is enlarged and vacuolated, giving the impression of a foamy or granular structure. This picture may suggest a lipid storage disease, which it is not. Brante[38] in 1952 first showed that there is an accumulation of mucopolysaccharides in the tissues in gargoylism. The enzymes responsible for the breakdown of these mucopolysaccharides have not as yet been identified.

Enzymes Which Have Faulty Action On Lipoid Materials

The diseases included in this group are characterized by cerebroretinal degeneration. In each, there is a normal neonatal development period followed by progressive motor and mental degeneration. Pathologically there are abnormal deposits of lipids. These occur mainly in the neurons and, at times, in the reticuloendothelial cells. These lipids are sphingomyelins, cerebrosides and gangliosides. All are classified as sphingolipids. Cerebrosides, sphingomyelins, and cholesterol are usually found in the myelin sheaths of the nerves. The gangliosides, which contain neuraminic acid, are found in the nerve cells and nerve fibers.

All affected cells in these sphingolipidoses contain a mixture of lipids. In each of the disorders to be described individually hereafter there is a characteristic predominance of one particular lipid in the affected cells.

Amaurotic Familial Idiocy[39]

There are four forms of amaurotic familial idiocy. These are: (1) The early infantile type, better known as Tay-Sachs[40] disease, (2) the late infantile type, which is also known as the Spielmayer-Vogt disease, (3) the juvenile form (Jansky-Bielschowsky disease), and (4) the adult type, or Kufs disease.

The Infantile Form or Tay-Sachs Disease:

The patient is normal at birth, but becomes listless at about four to six months after birth. A gradual, progressive weakness develops with hyperemesis, visual disturbances with cherry-red spots in the macula (the cells in the macular region become swollen and filled with lipids, but the choroidal blood vessels remain visible as a red spot), clonic muscular twitching, convulsions, and decerebrate rigidity. The general nutrition remains good, but the muscles are flabby in spite of the muscular twitchings and rigidity. The reflexes become hyperactive. Extension spasms or bouts of "explosive laughter" develop. The infant becomes sluggish, does not see well, is not as alert, does not hold up its head as well as before. In the final phases it cannot see, grasp or sit. It lies apathetically until it succumbs to an intercurrent infection.

This disease is recessive and familial. It occurs usually in Jewish children—rarely in any other race. Death usually occurs by two years of age.

In early cases of Tay-Sachs disease, gangliosides free of neuraminic acid accumulate in the ganglion cells. The neuraminic acid becomes secondarily bound to the abnormal metabolic products. The ganglioside content of grey matter is distinctly increased up to 10 times the normal value. In these same cells there are also very small quantities of sphingomyelins, cholesterol esters, and glycerophophatides. The accumulation of these lipoid materials in the cells would indicate the presence of certain enzymopathies in the lipase group.

The Late Infantile Type (Spielmayer-Vogt)

This condition is very rare. The symptoms, which appear at three to four years of age, are the same as those for the Tay-Sachs type with one exception—instead of the typical cherry-red spot, there is a macular degeneration, which occurs in non-Jewish children. The progress is the same as for the Tay-Sachs type.

The Juvenile Type (Jansky-Bielschowsky)

This type occurs between four and 10 years of age. There is loss of vision, ataxia, mental retardation, spasticity of muscles, and optic atrophy with macular degeneration and pigmentation of the retina. There is no cherry-red spot. The slowly progressive course extends over about a 10 year period.

The Adult Type (Kufs)

This type is exactly the same as the Juvenile Type above except that it occurs between 10 and 15 years of age. The course is also the same as the Juvenile Type above.

Niemann-Pick Disease[41]

The child is apparently normal at birth. In a few months, however, it begins to lose weight, becomes dehydrated, and a progressive paralysis without reflex changes appears. Mental deterioration and deficiency also appears. A cherry-red spot at the macula—identical with that seen in infantile amaurotic idiocy (Tay-Sachs)—is present. A reliable differential point is that the liver and spleen are greatly enlarged in Niemann-Pick disease, but not in Tay-Sachs disease. Niemann-Pick disease is also recessive and familial. It occurs mainly in Jewish children.

The lipid, sphingomyelin, is greatly increased in the ganglion cells, and in histiocytes and reticular cells, forming the so called Niemann-Pick foam cells which are seen in biopsy sections of the liver, spleen, lymph glands or central nervous system tissues. These lipids are also commonly seen in the monocytes and lymphocytes of the blood. Cholesterol and lecithin are also found in this lipid material.

Gaucher's Disease[42]

Mental retardation is found only in the acute type of Gaucher's disease—not in the chronic type. Typically, the affected child is normal at birth. In a few months the spleen and liver become enlarged. Soon the child becomes hypertonic and spastic, and may have opisthotonos, cough, laryngospasm, and cyanosis. Lymphadenopathy, pulmonary infiltration, anemia, and thrombocytopenia develop. There are no characteristic retinal changes. Death occurs at one to two years of age in this acute form. The chronic form, which progresses more slowly, may have long periods of remission. Its ultimate outcome, however, is the same.

The cells of the reticuloendothelial system are affected mainly by an accumulation of cerebroside-like glycolipids which are firmly bound to proteins. The ganglion cells do not participate in this storage process. Besides spleen, lymph nodes, liver, bone marrow, and lungs, the adventitial cells of the brain may be affected. Involvement of the cerebral vessels by the abnormal process serves to explain the neurologic phenomena seen in Gaucher's disease.

Miscellaneous Enzymes and Substrates

The Fanconi Syndrome[43]

The Fanconi syndrome is usually not associated with mental retardation. Any mental retardation that may be present, however, is mild and is due to failures of proper nourishment. The infant or young child usually fails to thrive, has a severe form of rickets which is resistant to vitamin D in ordinary doses, chronic acidosis, polyuria, renal glycosuria, hypophosphatemia, amino-aciduria, and often electrolyte disturbances with hypokalemia. Dwarfing and concomitant ricketsial deformities are present. Bone marrow biopsies or other biopsies—such as in the conjunctiva or cornea or lymph nodes—reveals a widespread deposition of cystine crystals throughout the tissues (cystinosis). The plasma amino acids are all within normal limits in spite of the severe amino-aciduria. Therefore, this condition may be due to a defect in the renal tubular reabsorption mechanism or to a generalized defect in protein metabolism with an overflow phenomenon occuring in the kidneys.

Congenital Familial Nonhemolytic Jaundice With Kernicterus[44]

Jaundice is not present at birth, but it may appear usually between the first to the sixth days of life. This jaundice can especially be noted in the sclera of the eyes. The jaundice is followed by lethargy, petechiae, muscle spasm or hypotonia, respiratory difficulty, and loss of the Moro reflex. Most infants who have kernicterus do not survive. If they do survive, there is marked delay in neuromuscular maturation—usually with spasticity, but occasionally with hypotonia—and a severe mental retardation which may or may not be accompanied by aphasia, deafness, blindness, athethosis and convulsions.

Kernicterus is most commonly found in infants from Rh factor incompatibilities leading into erythroblastosis. Other blood incompatibil-

ities—such as the ABO factors, the Kell factor, the MNS factor, hemolytic disease of the newborn, jaundice in the premature, overdosage with Vitamin K or its analogues in the early newborn period, etc.—can also lead to bilirubinemia and kernicterus.

Kernicterus should be suspected when the cord blood level of bilirubin is 3 mg. or more, or when the serum bilirubin level is about 10 mg. in the first 24 hours of life. The critical level of indirect bilirubin is 15 to 20 mg. Treatment by exchange transfusions should be given before these toxic levels are reached. A second and even a third exchange transfusion may be necessary if the serum development indirect bilirubin level reaches 15-20 mg., if kernicterus development is to be prevented.

The possibility that the indirect bilirubin is toxic and causes the brain damage instead of the direct bilirubin is supported by in vitro studies which showed an inhibitory effect on brain respiration of the indirect, but not of the direct, bilirubin. Lathe[45] and his co-workers in England, and Schmid[46] in the United States, showed that the direct reacting bilirubin was a bilirubin glucuronide and that the conversion of indirect bilirubin to direct bilirubin glucuronide required the prsence of an enzyme in the liver, glucuronyl transferase. It has been shown by many workers that there is a deficiency of glucuronyl transferase in the newborn and premature infants. In the fetal guinea pig there is no glucuronyl transferase enzyme activity, but this rises rapidly to adult levels by 20 days of age. This could explain the disappearance of physiological jaundice with the full development of this enzyme system.

It is altogether conceivable, therefore, that in future years more effective means—at an enzyme level—may be used to control hyperbilirubinemia, obviating the necessity for the much more tedious (and not without risk) exchange transfusion procedure.

Congenital Methemoglobinemia[47]

The child with this condition is intensely cyanotic at birth. All of the symptoms of anemia—such as weakness, dyspnea, rapid pulse, etc.—are apparent. Mental retardation may or may not occur, depending on the amount of anoxic brain damage (which could be sustained while still in utero or at birth). Dwarfing also occurs in these more severe cases.

Many of these individuals show a marked slaty blue cyanosis. Others frequently appear to suffer from no physical disability and are able to lead perfectly healthy and active lives without specific treatment. Still others, however, show a certain degree of dyspnea on effort, and there may be a marked compensatory polycythemia. The more severe cases show the dwarfing and mental retardation.

In methemoglobinemia, a substantial proportion of the circulating hemoglobin exists as methemoglobin. This, of course, is a pigment in which the hemoglobin iron resides in the ferric state, and is thus incapable of transporting oxygen. In congenital methemoglobinemia there is a hereditary absense of activity by the erythrocyte enzyme diaphorase, which acts to reduce methemoglobin through the DPNH (reduced diphosphopyridine nucleotide) system. This anomaly is apparently inherited as an autosomal recessive trait.

In the normal individual, the DPNH system reduces methemoglobin, keeping the level below 0.15 Gm. per 100 cc. Although five Gm. per 100 cc. of reduced hemoglobin are necessary to produce cyanosis, a level of about one gm per 100 cc of methemoglobin will result in apparent cyanosis. Individuals with this disease show fluctuating levels of methemoglobin. This fluctuation may be caused by the dietary intake of substances which act as reducing agents—such as ascorbic acid—or to the intake of methemoglobin-producing substances.

The percentage of methemoglobin can be reduced by the administration of ascorbic acid or methylene blue. Ascorbic acid in extra large doses does not completely eliminate methemoglobin, however. About 500 mg. of ascorbic acid per day will gradually bring the methemoglobin level down to about one to two per cent of the total. This renders the patient asymptomatic except for the social stigma of being "blue".

The action of methylene blue is more rapid and complete than that of ascorbic acid. It is thought that methylene blue causes methemoglobin to be reduced by alternative enzyme systems which are otherwise unable to do this, or to do this at too slow a rate. Gibson,[48] in 1948,

suggested that methylene blue opened up pathways involving DPNH and the erythrocyte diaphorase.

Autosomal Trisomy Conditions[49]

Autosomal trisomy conditions have been characterized by mental retardation and multiple malformations. Autosomal trisomy G or 21 is better known as Down's syndrome, or mongolism. Autosomal trisomy D or 13-15, and autosomal trisomy E or 16-18, have also been described. Because of the multiple malformations and the mental retardation it is conceivable that the extra chromosome in these conditions may cause the formation of some as yet unknown protein or proteins which could, in turn, inhibit one or more enzymes with multiple functions (like the phosphoglucomutase which is inhibited in galactosemia), thus accounting for the many and diverse malformations in these conditions.

Professor Helmuth Haubold,[50-60] of Germany, along with many others, has approached the treatment of these conditions by giving the affected children all of the vitamins (the fat soluble vitamins being given in a non-homogenized, emulsified form for better absorption), all of the minerals, all of the enzymes, all of the endocrines, plus the cellular therapy of Dr. Niehans.[61,62] Remarkable results were achieved, provided that all foci of infection were first eliminated. Physiologically, the children so treated were almost normal physically. Mentally, there is an average increase in I.Q. of from five to 50 points. Stopping this treatment caused noticeable retardations in learning power and in certain physiological phenomena. Restarting the treatment brought analogous improvements again. This, in itself, is proof of the efficacy of this type of treatment.

Upon analyzing the therapy of Professor H. Haubold it will be noticed that all of the enzyme systems in the body are definitely being affected by this type of treatment. Plausible explanations of these effects may be derived from these facts:

(1) All vitamins have been shown to act as co-enzymes in the human and animal body.

(2) Minerals have been shown to act as activators of enzymes in the body.

(3) The interaction of hormones and enzymes is well known since many, if not all, of the physiological effects of hormones are mediated by their regulation of specific enzyme reactions within the cells.

(4) The oral administration of enzymes would help in the digestion of food locally in the intestines and achieve better nutrition for the entire body. However, the absorption of enzymes through the intestinal tract into the blood stream has been proven beyond question by Gustave Martin[63] and others.

(5) Finally, cellular therapy in the form of lyophilized (deep frozen and dehydration under deep freeze by vacuum) cells from different parts of the animal body (usually sheep) is also given in the Haubold Therapy. Because one of the authors has been making enzymes for many years by lyophilization, the analysis of enzymes in different lyophilized animal cells was done. It was found that liver lyophilized animal cells when activated with water contained all of the enzymes to be found in the normal liver cells of the same type. Therefore, it becomes obvious that when injecting lyophilized animal cells, the enzymes contained therein are certainly also being injected.

The conclusion to be drawn from the Haubold therapy of Autosomal Trisomy conditions in the above analysis is that enzymes are at the basis of this type of treatment. Until such times as the individual enzymes affected in autosomy trisomy conditions are detected and isolated, this comprehensive type therapy of Haubold is the best available treatment of these conditions.

Summary

The metabolic potential of a tissue is but a reflection of the enzymes which are contained within its cells. The many "inborn errors of metabolism" which cause mental retardation and are described in this paper, and the many yet unknown and still to be described similar conditions in the field of mental retardation, would seem to justify the basic approach of enzymology.

The results already obtainable even with the present limited knowledge in this area, plus the rapidly expanding field of enzymes in mental retardation, would seem to justify further and more extensive and detailed studies of enzymes in mental retardation.

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Fifteen Years of Cesarean Sections

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One of the more rewarding types of medical research available to the practicing physician is a periodic review of his work. (The reward comes if the survey reveals the results to be as good as the researcher thinks they are.) We are presenting such a review of a 15 year period from 1948 through 1962. Carle Memorial Hospital now has 150 beds of which 15 are obstetrical beds. The Obstetrical Department contains two delivery rooms and three labor rooms. Approximately 95% of the patients are private cases. All of the physicians who practice obstetrics in this hospital are either board certified or are eligible for certification. Twenty-four hour anesthesia coverage is provided by either nurse or physician anesthetists. Since Carle Memorial Hospital is located in Urbana, Illinois, the home of the University of Illinois, there is a broad racial mixture of patients from many countries of the world. More than 90% of the obstetrical patients are Caucasian.

The incidence of cesarean section is an interesting and revealing statistic. During the period of time from 1948 to 1962 sentiment among obstetricians changed. A cesarean section was almost a last resort procedure at one time. Today most obstetricians believe in doing this operation sooner, and prefer it to a difficult and traumatic mid forceps.

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TABLE 1

Incidence Cesarean Sections and Mid-Forceps		
Sections	1948-62	2.93%
Sections	1948-52	2.43%
Mid Forceps	1948-52	1.01%
Sections	1958-62	3.05%
Mid Forceps	1958-62	0.87%

The results of this trend are apparent in our statistics, which show a 25% increase in incidence between the last five and the first five years. The overall incidence during the last five years was 3.05% compared to 2.43% during the first five years. The incidence of mid-forceps decreased from 1.01% in the first five years to 0.87% in the last five years—or 14%. The number of mid-forceps are perhaps too few to be of real statistical significance. It was also noted that some of the obstetricians were less likely to label an operative delivery mid-forceps than others. To underestimate the magnitude of a forceps delivery is easy.

There were 202 patients in this series, and 264 cesarean sections were done.

TABLE 2

264 Cesarean Sections		
Primary	106	40.15%
Secondary	158	59.85%

One patient had six cesarean sections. There were 106 primary sections for an incidence of

40.15%. During the past 6 or 7 years the obstetricians of Carle Hospital have all adopted the dictum of "once a cesarean, always a cesarean" except in unusual circumstances. Should a patient, on admission to the hospital, be essentially ready for delivery, vaginal delivery would be done. We also might elect to deliver a patient vaginally should she go into labor before 24-26 weeks. About ten years ago, it was the policy of some obstetricians on the staff to deliver a select few patients vaginally. Gradually, and without any particular pressure, the obstetricians have changed. The two case reports that follow any may have been part of the reason for this change.

Case Reports

Case 1. Age 33, G iv, Para ii. The first pregnancy was uneventful and terminated in a rountine low forceps delivery of an 8#,5 oz. infant after a 12 hour labor. The second pregnancy terminated at 35 weeks with an emergency cesarean section, done because of abruptio placenta. The infant weighed 4#,12 oz. and survived. A third pregnancy ended in a spontaneous abortion at 6 weeks gestation. During the fourth pregnancy the patient and her husband expressed a strong desire to have the child born vaginally. After discussing the possible hazards, it was decided that a trial of labor would be attempted. At 38 weeks gestation the patient entered the hospital in mild desultory labor. The station was 0 to plus 1, the cervix was well effaced and dilated 2 cm. The delivery room was prepared for an emergency cesarean section, the patient was cross-matched with 2000 cc. of blood. Mild contractions continued, but the cervix remained unchanged. After 60 hours of this vigil, during which time the obstetrician remained in the hospital, it was decided to rupture the membranes. This was done. Eighteen hours later the situation remained unchanged. Finally after 78 hours, labor began and four hours later the patient spontaneously delivered a 5#,14 oz. infant. Immediate post-delivery exploration of the uterus revealed the scar to be apparently firm and in good condition. During this 82 hour session, mother, father, nurses, and last but hopefully not least, the physician became somewhat discouraged about the situation.

About 18 months later the patient returned for prenatal care for a fifth pregnancy. She was accompanied by her husband. Each expressed appreciation in glowing terms of the previous pre-natal care and the management of the labor and delivery. Both husband and wife stated flatly and unequivocally that neither could personally endure, nor would they see their friendly obstetrician endure, another such ordeal. Husband, wife and obstetrician promptly agreed that the ideal method of delivery for the fourth child would be by elective low cervical section, which was done.

Case 2. W. F., age 23. This patient apparently had a face presentation with her first pregnancy. She had a cesarean section done after 20 hours of labor and after complete dilatation of the cervix for some hours. This section was of the classical type and was not done in Carle Hospital. Near term with the second pregnancy the cervix was well effaced, 2-3 cm. dilated and the station was plus one. Patient and husband were desirous of a "normal delivery" if possible. After an uneventful five hour first stage and a 20 minute second stage the patient was delivered by outlet forceps of a 7 lb. infant. Immediate exploration of the uterus revealed the scar of the previous section to be firm and intact.

Fourteen months later the patient returned for prenatal care for the third pregnancy. It was decided to again deliver the infant vaginally. At 38 weeks gestation the patient was admitted to the hospital with mild uterine contractions of one hours duration. Ten minutes after admission, and before initial examinations were made, the patient complained of severe abdominal pain, chiefly in upper mid-abdomen. Immediate cesarean section (50 minutes later—it was 2:00 a.m.) was done. The fetus was dead, and the abdomen filled with blood. The uterus was ruptured from the superior portion of the fundus to within 1 cm. of the external cervical os. The uterus was so damaged that total abdominal hysterectomy was done. 3500 cc. of blood and 500 cc. of dextran were administered. The patient recovered and was dismissed from the hospital eight days later. This was the only case of true rupture of the uterus in the series.

Type of Section

The type of cesarean section was low cervical in 95.8%; classical in 1.20% and cesarean hysterectomy in 3.0%. One classical section was done for extensive carcinoma of the cervix, one because of "fetal distress," and one because of "hydrocephalus of the fetus." There were eight hysterectomies done at the time of cesarean section.

TABLE 3

Cesarean Hysterectomy	
Myomata	3
Sterilization	2
Ruptured uterus	1
Prev. menorrhagia	1
Control bleeding	1

Three were done because of uterine fibroids. Two were done for sterilization and also because of "marked thinning and scarring of the lower uterine segment" (one of these patients had 5 cesarean sections). One hysterectomy was done because of a ruptured uterus, one because of a long prior history of severe menor-

rhagia, and one was done three hours after the cesarean to control bleeding.

Indications

The largest indication for cesarean section was a previous section, in 158 cases or 59.8%.

TABLE 4

Indications for Cesarean Sections	No Cases	% Total
Previous section	158	59.8
Cephalopelvic disproportion	46	17.1
Placenta praevia	20	7.6
Abruptio placenta	14	5.3
Diabetes mellitus	7	2.7
Multiple leiomyomata	3	1.1
Prolapse of umbilical cord	3	1.1
Dysfunctional labor	2	0.8
Malpresentation	1	0.4
Others	10	3.8

Mortality and Morbidity

No deaths occurred in the series. The patient who had the stage iv carcinoma of the cervix died nine months later. Sixteen patients were morbid, for an incidence of 6.06%. The causes of the morbidity are shown in Table 5.

TABLE 5

Causes of Morbidity		
Urinary infections	9	
Endometritis	4	
Respiratory	3	
	16	or 6.06%

The incidence for vaginal deliveries of all types during the same period was 1.21%. Thus, the incidence of morbidity was almost exactly 5 times as great in cesarean section as in vaginal delivery.

Anesthesia

All of the obstetricians of Carle Hospital prefer some form of regional anesthesia for sections. The anesthetics are usually administered by a physician anesthetist.

The majority of the spinal and caudal anesthetics were supplemented by intravenous anesthesia after the infant was delivered. Cyclopropane was used in virtually of the general anesthetics.

TABLE 6

Types of Anesthesia	
Spinal	78.8%
Caudal	10.2%
General	10.2%
Local infiltration	0.8%

Blood Transfusions

The incidence of single transfusions is high, but the overall incidence of transfusion is low. Certainly transfusions are not routinely administered.

TABLE 7

Blood Transfusions		
500	12	
1000 cc. or more	11	
	23	or 8.7%

Premature Births

Using the birth weight as the only criterion for prematurity, 23 infants weighed 5#, 8 oz. or less, and were classified as premature. The indications for the delivery are shown in Table 8.

TABLE 8

Indications for Delivery	
Abruptio placenta	10
Placenta praevia	5
Diabetes	3
Uterine inertia	1
Repeat cesarean section	4

In four cases of the 264 the infant was premature by weight, and there was no circumstance apparent which made delivery imperative. The majority of elective sections were done about the 38th week of gestation, depending somewhat upon estimated size of the fetus.

TABLE 9

Age Group	
Less than 20 years	15
20-29 years	139
30-39 years	101
Over 40	9
	264

TABLE 10

Perinatal Mortality (Uncorrected)		
Neonatal deaths	8	
Fetal deaths (stillborns)	6	
	14	or 5.30%

The uncorrected perinatal mortality in 9150 vaginal deliveries during these same years was 2.55%, or approximately one-half as much.

TABLE 11

Associated Surgery	
Tubal ligations	58
Appendectomies	31
Hysterectomy (6 total, 2 subtotal)	8
Myomectomy	6
Hernia repairs	4
Ovarian cysts	3

The policy regarding sterilizations has been modified through the years. Tubal ligation today is most usually done after three sections, and strongly recommended after four.

During the past ten years, the appendix has been removed in an increasing number of cases. There have been no complications to date due to appendectomy. There is no apparent increase in morbidity or increased length of hospital stay with appendectomy, though admittedly the series is small. The appendix had previously been removed in 61 of the 202 patients.

Total abdominal hysterectomy at the time of section is done in a smaller number than in most series. This is certainly a challenging operation though not necessarily a formidable one. Three of the eight patients who had a hysterectomy received blood transfusions, and the average hospital stay was increased from 8 days for the usual section to 10 days. One of the eight patients was morbid.

Conclusion

A summary of 15 years of cesarean sections comprising 264 operations has been presented. During this time in Carle Hospital, as in most hospitals, there has been a trend toward more liberal use of cesarean section for delivery. There also is a trend toward doing more associated surgical procedures and more routine abdominal explorations, a trend that the authors follow and believe will continue.



DON'T MISS

The Special
COMMUNITY HEALTH WEEK
Message From
STAN MUSIAL

ON PAGES 371-372
OF THIS MONTH'S IMJ—
RIGHT IN FRONT OF THE PULSE!

Tuberculin Testing: Clinical Applications

R. J. Dancey, M.D., *Danville*

Today most physicians encounter tuberculosis only infrequently. Most know, however, that tuberculosis is still prevalent enough to be an important consideration in differential diagnosis. They know that tuberculosis intrudes into the clinical situation when least expected. Conversely, there are several rather common diseases which mimic tuberculosis—such as lung cancer and histoplasmosis.

A further practical consideration, important to the physician who believes in preventive medicine, is that the best practice detects tuberculosis before the patient has symptoms—and before the disease becomes communicable.

The tuberculin skin test is a simple tool, available to all physicians in the office as well as in the hospital. The purpose of this paper is to illustrate the usefulness of the test in both the diagnostic and preventive aspects of practice. The experiences to be related are drawn from a rural-industrial county of 100,000 people in central Illinois. Cases will be presented in the following order:

1. In differential diagnosis.
2. In case detection.
   a. In tuberculin reactors.
   b. In contacts of reactors: source cases.
3. In detection of infection in contacts of cases.

Differential Diagnosis

Tuberculous meningitis today has a good prognosis for complete recovery, provided that vigorous treatment is started before irreversible brain damage has occurred. To this end, treatment should be started not later than 3 weeks after the first symptoms. However, the initial symptoms are likely to be protean—hence the value of the routine Mantoux test for all sick children.

September is "TB Prevention" month in Illinois, during which time the Illinois State Medical Society and Illinois Tuberculosis Association are cooperating in a full-scale educational campaign to encourage TB testing for Illinois citizens. For this reason IMJ considers it especially timely and appropriate to publish the following article on tuberculin testing.

The Editor

Case 1. A 3-year-old boy was brought to a physician with mild fever, vomiting and loose stools. The parents failed to tell the doctor that until 2 month previously the child had frequent contact with a tuberculous aunt. Treatment was given for a presumed virus infection. The child's fever increased and the mother noted that the left eye became crossed. He was admitted to a general hospital under care of a pediatrician about 2 weeks after the onset, and at the time of admission was still bright and alert. Four days later a Mantoux test was given with positive result. By this time the patient was comatose, and the physical findings, spinal fluid examination, and chest X-ray picture were those of miliary tuberculosis with meningitis. Under treatment with anti-tuberculosis drugs and prednisone the child survived, but remained in a decerebrate state.

Cancer of the lung presents itself to the physician in various disguises, and not infrequently the roentgenographic picture is indistinguishable from that of tuberculosis. It is not unusual to have the situation further confused by an equivocal report of acid-fast bacilli in the sputum. When the physician fails to take advantage of the help which a tuberculin test can give, an unfortunate delay in making the proper diagnosis may occur.

Case 2. A 63-year-old man was admitted to a general hospital because of fever and symptoms of respiratory infection, of 2 weeks' duration. Exactly the above combination of circumstances occurred. The result was that his physician placed him on anti-tuberculosis chemo-

therapy for 6 weeks and then discharged him to a tuberculosis hospital. There, the admission Mantoux tests were negative with intermediate and second strength Old Tuberculin, although the X-ray appearance was quite compatible with tuberculosis of the right upper lobe. Pneumonectomy was performed 1 week later. The surgeon found squamous cell carcinoma of the bronchus with regional metastasis; there was no evidence of tuberculosis.

Case Detection in Tuberculin Reactors

As a screening test for tuberculosis in routine health examinations, the skin test has a great advantage in economy and specificity as compared with X-ray examination, especially in age groups under 40 years. For this purpose Tuberculin, Purified Protein Derivative (PPD) in Intermediate Strength (5 Tuberculin Units per dose of 0.1 cc.) is preferred. In our area, I read as positive those reactions which have palpable induration measuring 10 mm. or more in diameter.

Case 3. A 9th grade girl had a positive Mantoux test in health examinations conducted at school (induration 25x30 mm. in diameter). She had no symptoms. X-ray examination showed mild infiltrates in both upper lobes, without visible cavitation. Gastric cultures were positive. An uncle was the likely source of infection; his tuberculosis had been previously discovered and treated.

Case Detection in Contacts of Reactors: Source Cases

Case 4. A 5th grade girl had a positive Mantoux test at school (induration 13x15 mm. in diameter). She was healthy, and showed no X-ray evidence of active infection. Her father, who was without symptoms and working regularly, was examined as a contact. He had far advanced bilateral cavitary tuberculosis.

Detection of Infection in Contacts of Cases

When a new case of tuberculosis is discovered in a communicable phase, the skin test will reveal which contacts have been infected and which have escaped infection. Prophylactic treatment for the infected persons can be started when appropriate (this has been termed "secondary prophylaxis", signifying the prevention of tuberculosis *disease* as distinct from prevention of tuberculous *infection*). The physician must not forget that there is a latent period of approximately 3 to 8 weeks between infection and detectable skin hypersensitivity.

Case 5. A 2-year-old boy was admitted to a general hospital with a large mass protruding from the left side of his neck. A skin test for tuberculosis was not done, but surgical excision was attempted, and fragments of caseating nodes were removed. Following surgery the wound drained copiously, and the drainage was positive for typical *M. tuberculosis.* Some 17 recovery room and ward personnel had contact with this child. They were given Mantoux tests 2 weeks after the contact, and 3 reacted; these were certainly old infections. Six weeks later the non-reactors were retested; 2 now had positive tests—on a young Nurse Aid in the recovery room, the other a young R.N. in the pediatrics ward. Both were started on a year's course of isoniazid.

Technical Considerations

The intradermal tuberculin test (Mantoux) is one of the most reliable tests in the field of medicine, provided certain simple details of technique are conscientiously practised. An intradermal needle should be used, having a short bevel*. It should be fixed firmly to the hub of the tuberculin syringe, with the bevel of the needle on the same side as the metric graduations on the syringe barrel. Holding the barrel at about a 45 degree angle to the skin, barely catch the needle point in the skin of the volar surface of the forearm or of the scapular region, bevel up. Then lower the barrel until it is nearly parallel with the skin, and advance the needle point 1 to 2 mm., until the needle opening is barely within the outer layer of the skin. Watching the scale on the syringe, inject exactly 0.1 cc of tuberculin. This should raise a well defined wheal; if it does not do so, the needle is too deep (but do not re-inject). Slight oozing of blood from the puncture may occur in some cases.

The test may be read in 2 to 5 days, preferably in 72 hours, and it is read by palpation and with a millimeter ruler. According to national standards (Diagnostic Standards, National Tu-

*A disposable needle with 30 degree intradermal bevel is being marketed by BD, at 4-5¢ each. Disposable tuberculin syringes graduated in 1/100th cc. are being offered very inexpensively by BD, MONOJECT, and other firms.

*In this country PPD is marketed by P.D. & Co., and by M.S. & D. It is available in 1, 5 and 250 TU strengths and in 10-dose and 50-dose packages.

In Illinois the state Department of Public Health distributes without charge a buffered solution of PPD 5 TU, carrying a 9-month expiration date. This may be obtained in 10 cc. vials from the Bureau of Biological Products, Division of Laboratories, Chicago 12.

berculosis Association), palpable induration 6 mm. or more in diameter is a positive test. For screening purposes, 10 mm. is probably a better dividing line, and will eliminate most false positive (non-specific) reactions.

The material used for the test may be either Old Tuberculin (OT), or Purified Protein Derivative (PPD). Commercial PPD appears to be well standardized, and is generally preferred to OT. * The various strengths are best expressed in Tuberculin Units (TU). For screening, the 5 TU strength is standard, and will reveal practically 100 per cent of significant infections. For diagnosis, it may be preferable to start with 1 TU, and to follow with 5 TU and 250 TU. A negative test with the latter will eliminate the possibility of tuberculosis except in the acute miliary case or in the markedly debilitated or aged patient.

If screening is being carried out in the age group past 60, in which diminished skin reactivity is the rule, 5 TU probably should not be relied upon. A dose of 25 or 50 TU would be more dependable. More investigation is needed on this question.

For relief of the occasional severe hypersensitivity reaction, which may even present lymphangitic streaks on the upper arm, dressings of cold magnesium sulfate solution usually suffice. The occurrence of necrosis at the center of the reaction may be headed off by application of a corticosteroid cream or ointment. This should be started not later than 24 hours after the test is applied, when it appears that the reaction is unusually severe.

Conclusion

The physician who routinely uses the tuberculin test in his practice is not likely to be caught unawares by unsuspected active tuberculosis. The skin test is also a useful tool for ruling out tuberculosis in the diagnosis of disease which simulates TB.

It is estimated that 20 to 30% of the present U.S. population carry tubercle bacilli within their tissues, as evidenced by skin reactivity to tuberculin. It is further estimated that 1 or 2 per thousand of such tuberculin reactors develop active tuberculosis each year.

If we are ever to eliminate tuberculosis as a threat to health, we shall need all available man-power in the program of early detection and preventive treatment—certainly including the private physician in his daily practice in office and hospital.

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Rapid Therapy with Betamethasone in Severe Intermittent Asthma

Donald L. Unger, M.D.; Leon Unger, M.D.; and Gerald Cohen, M.D., *Chicago*

Many papers[1,2] have been written on the use of steroids in bronchial asthma. In a study of the literature, however, the investigators were unable to find articles on the use of steroids for only 4-6 days in status asthmaticus, although Gant[3] did use a "6 day regimen" in poison ivy. In a previous study,[4] we found that 0.6 mg. tablets of betamethasone (Celestone®)* are more potent than 5 mg. tablets of prednisone in chronic bronchial asthma. Also, betamethasone seemed to be effective in 2-4 hours as opposed to about 6-8 hours for prednisone in relief of asthmatic symptoms. We therefore decided to try betamethasone in a group of acutely ill asthmatic patients who might otherwise have required hospitalization. We wanted to see if their symptoms could be abated with sufficient safety, speed, and efficiency to prevent any serious disability. Because many of the attacks were precipitated by infections which might be masked by the steroids, most of the patients were also given tetracycline; this was especially true for the children. No double blind studies were attempted as these patients were generally quite ill. All of them had had complete allergic investigations and many were being hyposensitized. At the time the betamethasone therapy was initiated, all patients were no longer benefited by isoproteronal inhalations or ephedrine preparations.

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*Celestone® furnished courtesy of the Schering Corporation, Union, N.J.

Method

Fifteen patients with severe intermittent asthma were given a total of 41 courses of betamethasone, the doses varying from 3 to 6 tablets (0.6 mg.) the first day and then decreasing dosage by one tablet a day until the steroid therapy was completely eliminated. In several cases only two tablets were given the first day as it was evening or night when the treatment was begun. The children and most of the adults were also given tetracycline in full therapeutic doses, the exception being patients with known causes of difficulty, such as house cleaning or exposure to paint.

Case History

This 6-year-old white male patient was said to have wheezed with his first breath, and was put on Mull-soy immediately after birth. He was first hospitalized for asthma at 18 months of age in October, 1959, at which time his dyspnea was so severe that a tracheotomy was considered. He was hospitalized seven more times for asthma before we first saw him in January, 1962, each attack having been precipitated by a bronchial infection; pneumonia was usually found on chest x-ray. He was worse in spring and fall, and was especially bad in October. Between attacks he was apparently normal.

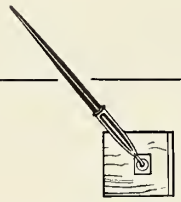
On physical examination no abnormalities were found except for some pallor and bogginess of his nasal mucosa. Laboratory work revealed 5% eosinophils in the peripheral blood smear and 45% in the nasal smear. Skin testing revealed large scratch reactions to dust, cat, and feathers; other tests, including foods, were negative. The dog and the cat were eliminated from the household and a dehumidifier installed in the basement. Hyposensitization was attempted but later abandoned because of repeated systemic reactions to even dilute extracts. In October, 1962, the patient again developed a severe attack of asthma and was promptly given two 0.6 mg. tablets of betamethasone as well as 125 mgms. of tetracycline. Two hours later he was hospitalized at Michael Reese Hospital (Chicago), by which time his symptoms had almost abated. The chest X-ray revealed brochopneumonia which responded to tetracycline and aerosol treatment. Sweat electrolytes and serum electrophoresis were normal. This was his last hospitalization. On six subsequent occasions the patient was given betamethasone, four tablets the first day, three the second, two the third, and one on the fourth day, as well as 125 mgms. of tetracycline four times a day. Each attack cleared within 2 to 3 hours, an event which was unheard of for this particular child. Between attacks he remained asymptomatic. He has never manifested any signs of steroid dependency.

Summary and Conclusions

Fifteen patients were given a total of 41 courses of betamethasone because of severe intractable asthma. In all cases they were markedly improved within 2 to 4 hours and stayed virtually symptom-free despite decreasing the dosage one 0.6 mgm. tablet a day from the 3-6 tablets given the first day, until the patient was off of steroids. Almost never was there any rebound asthma from these short courses of steroids and no side effects were observed.

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Manuscripts should be submitted in duplicate, an original copy and one carbon, and typed with double spacing. An article should not exceed 4,500 words, should be briefer if possible.

Footnotes and references should conform to the following style in the order given: Name of author; title of article; name of periodical, with volume, page, month — day of month if weekly — and year. The Illinois Medical Journal does not assume responsibility for the accuracy of references used with articles.

The first page should list the title, the name of the author (or authors), degrees, and any institutional or other credits. The title should be as short as possible. Pages should be numbered consecutively. Tables are to be typed, numbered, and accompanied by a brief descriptive title. Make drawings and charts in black ink. If photographs are submitted, send black and white glossies. Number illustrations consecutively and indicate their place in the text. Number, indicate the top, and place the author's name on the back of each illustration.

Address manuscripts to T. R. Van Dellen, M.D., Editor, Illinois Medical Journal, 360 N. Michigan Ave., Chicago 1, Illinois.

The View Box

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital



Figure 1

This 56-year-old male fell down a flight of stairs and complained of pain in the left hip.

On physical examination, deformities of the hands and feet and contracture of the knees and elbows were noted.

What is your diagnosis?

1) Rheumatoid arthritis
2) Multiple myeloma
3) Gout
4) Metastases
5) Hyperparathyroidism

(Continued on next page)

—diagnosis and discussion *(Continued from preceding page)*

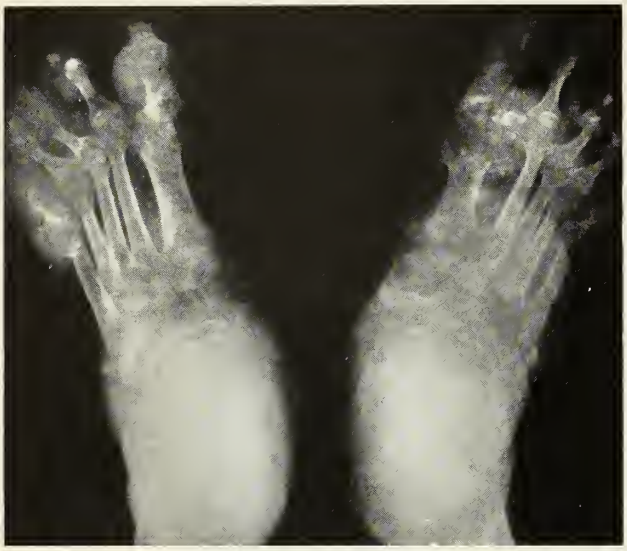


Figure 2



Figure 3

Diagnosis: Gout

This case presented itself in an interesting manner. Because of the acute trauma to the hip, the admitting intern referred the patient for pelvis films only. The diagnosis of gout was suggested at the time because of the presence of tophi, which were eroding areas in the right femoral neck and left ischium, and gave the appearance of sclerotic cystic areas. The patient was then returned for additional films, which revealed extensive changes of gout in the feet, hands, knees, and elbows.

Gouty changes are caused by the deposition of sodium urate crystals in tophaceous deposits in soft tissues, articular cartilages, and in the bones adjacent to the joints. There may be massive destruction of bone with almost complete loss of tarsals, metatarsals, and phalanges.

Figure 4



Figure 5



National Council on Radiation Protection and Measurements

The formation of the National Council on Radiation Protection and Measurements (NCRP) was announced last month in Washington, by Dr. Lauriston S. Taylor, President of the Council. The Council, a non-profit corporation, was created by an Act of Congress (Public Law 88-376), which was signed by the President on July 14, 1964. The Council was brought into being at its organizational meeting held in Washington on August 3, 1964.

One of the principal objects of the Council will be to collect, analyze, develop and disseminate scientific information and recommendations about protection against radiation and about radiation measurements.

So that Illinois physicians may contact the experts on this Council quickly and easily, IMJ this month lists the members of its Board of Directors. This page can be easily removed for permanent reference.

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IMJ EDITORIALS

This Sepember, the Illinois State Medical Society is cooperating with the Illinois Tuberculosis Association in a month-long campaign to encourage the public to be tested regularly for tuberculosis. Hard-hitting messages on the radio, in newspapers, and on outdoor billboards will warn families to stop this dread disease with regular physical check-ups. In support of this campaign, IMJ is pleased to publish the two following editorials, "TB: The Continuing Problem," and "Money Well Spent," both by eminent authorities in the field of tuberculosis.

TB: The Continuing Problem

In the late 1890's a relative of a member of our state legislature developed TB. It was called consumption in those days. The legislator wished to put this person in the state TB sanitarium and was surprised and irritated to find that the state had no such institution. The Department of Public Health was ordered to investigate the situation and find out if we needed such an institution. The Health Department reported that we did indeed need one.

For the next several years the Governor sought from the legislature a $200,000 appropriation to build a state sanitarium. They never succeeded in getting it. It was to be 50 years—an even half-century—before the legislature got in the mood to appropriate money for TB. While it seemed to become evident that the legislature would do nothing about the TB situation, Senator Glackin had his bill enacted into law. These in essence said that the state government was not interested in tuberculosis or how many of Illinois' citizens got the disease. But if some local group like a county, a combination of counties, or certain municipalities were silly enough to want to tax themselves to fight the disease, the state of Illinois would graciously permit them to do so.

The Glackin Act practically excluded the Health Department from control of tuberculosis and placed it in the hands of a Sanitarium Board. Sure, the Health Department had a representative on that Board, but the only power left to the Health Department was that of quarantine and bookkeeping.

In those counties where a sanitarium was built the man in private practice was also excluded from the care of his patients who had TB. Naturally the Health Department and the private practitioner being busy persons, they turned their attention to situations about which they could do something and so practically ignored TB for the next half-century—at least for the next quarter of a century. Now we need the attention of both of these people but they find their time taken up in other fields of endeavor.

What is the situation now in Cook County? We have the following agencies engaged in some way in the handling of this disease: No. 1 is the Municipal TB Sanitarium; No. 2 is the Chicago Health Department; No. 3, the TB Institute of Chicago and Cook County; No. 4, the State of Illinois has a hospital on the west side; No. 5, Suburban Cook County Sanitarium Tuberculosis District. Communication between these various organizations and between them and the Chicago Medical Society is not good.

The public is not only indifferent to TB, it is practically oblivious to the fact that there is a TB problem. This is true nationally as wtll as locally and is evidenced by the appropriation which Congress makes to fight these various diseases. It puts up just over $5 million dollars for TB, about $20 million dollars for VD, something like $145 to $147 million for cancer, and a like amount for heart disease.

Yet now we are told that there is some objection to the intensified skin-testing campaign that is now contemplated for some of the Chicago schools, the objection being that we do not have facilities for following up the contacts of kids that might be found positive and might be found to have a positive reaction.

(Continued on page 360)



Of 1,028 patients with confirmed respiratory infections... 954 or 92.8% were treated successfully with Signemycin®

Note:
Hammerl* selected his patients for treatment with Signemycin on the basis of demonstrated bacteriological resistance to other antibiotics or failure of previous therapy. Of 100 patients with various respiratory tract infections, 95 responded to Signemycin. Pathogens isolated included staphylococci and *Diplococcus pneumoniae*.

*Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958.

Condition	No. of Patients	No. Cured with Signemycin
Abscess, pulmonary	17	16
Bronchiectasis	19	13
Bronchitis	286	267
Bronchopneumonia	192	179
Empyema	12	11
Pneumonia, lobar	150	146
Pneumonia, other febrile	160	150
Various infected pneumopathies	192	172
Totals	1,028	954 (92.8%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

Science for the world's well-being® Pfizer *Since 1849*

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York, New York 10017

Editorials (Continued from page 358)

Well, if we don't have the facilities, why don't we, and what should we do about getting them? What part should the Chicago Medical Society play in the procuring of them?

It seems to me that the Chicago Medical Society should take the lead, and should organize the entire community in a drive against TB. We might very well go to the Mayor, ask his blessing on a renewed and more intense campaign. We might ask the Democratic party to also put something of the kind in their plank. We might, when the spring vacation comes along, have a luncheon for the Chicago legislators in our National Congress, and ask them to see that an adequate amount of money is appropriated to fight TB. We might also organize in such a way that TB would receive the same publicity as heart disease, cancer, or polio.

Sure, that would require some work, but not a great deal. And undoubtedly any organization approached would be glad to cooperate in bringing about this highly desirable situation.

A couple of years ago John Egdorf had a meeting attended by perhaps a dozen men, including Dr. Morris Fishbein. A number of very worthwhile suggestions were made as to how we might secure more nearly adequate publicity for TB.

I do not know that any of these ideas were followed up.

James H. Hutton, M.D.
Chicago

Money Well Spent

In this day and age, when millions of dollars are spent firing a single missile into the air for research and development purposes, it behooves us to re-evaluate the status of modern preventive medicine.

From time to time preventive measures are introduced, and the extension of these preventive measures over a period of time may appear to be too costly.

I have specific reference to the use of chest X-ray surveys in the early detection of active tuberculosis. Almost forty years ago surveys were made with large (14 x 17) films of the chest. We spent several thousand dollars to find one active case of tuberculosis. With the development of modern research techniques, the 4 x 5, 70mm and the 100mm X-ray films of the chest became practical, and with these tools the cost of finding a person with tuberculosis was greatly reduced. However, as time passed and the incidence began to decrease the cost rose proportionately. More individuals had to be X-rayed to find an active case of tuberculosis. Today, in some areas of the population one case of tuberculosis is found in every 1,000 people X-rayed. In other areas, it may take 3,000, 4,000 or even 5,000 chest X-rays to find one individual with the disease.

Other chest abnormalities also are found. In a review of the findings of the 1960 chest X-ray survey in suburban Cook County, for every active case of tuberculosis found, nine persons were discovered with old tuberculous scars previously unknown. Such persons need to be checked by large X-rays, by medical consultation, and by tuberculin skin test to verify the diagnosis of old tuberculous scars. Many of these cases require chemoprophylaxis with Isoniazid for a minimum period of a year to reduce possible recurrence of tuberculosis. Everyone knows that the patient with a positive tuberculin test runs a greater chance of coming down with tuberculosis than the one who has a negative tuberculin test. Seventy-five to eighty percent of the new active cases in the future will have a positive tuberculin skin test.

Today, in chest X-ray surveys, more cases of lung tumor are discovered than active tuberculosis. Many of these individuals are found in the state where surgical removal of the tumor will extend their span of life.

Ten times as many cases of other pathology, such as enlargement of the heart, extensive scarring, cysts, diaphragmatic hernia, histoplasmosis, pneumonitis, sarcoidosis, blastomycosis, and coccidiomycosis are found on TB X-ray surveys as active tuberculosis. These are re-

(Continued on page 362)



Of 507 patients with confirmed ear, nose and throat infections... 465 or 91.7% were treated successfully with Signemycin®

Note:
Adams,* whose 50 patients included 20 with ENT infections, stated that Signemycin "was particularly valuable in infections that did not respond to other antimicrobial agents, and in patients to whom penicillin could not be given." All his cases responded within five days; in most patients, all signs of infection disappeared in three days.

*Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957.

Condition	No. of Patients	No. Cured with Signemycin
Otitis media	90	86
Pharyngitis and laryngitis	162	148
Sinusitis	68	55
Tonsillitis and peritonsillitis	163	153
Various	24	23
Totals	507	465 (91.7%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

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Editorials (Continued from page 360)

ferred to the family physician for follow-up.

There is also a specific value in a *negative* chest X-ray film. In some areas of the population where chest X-ray surveys are still being done the films are kept for many years. There are numerous benefits in having these films readily available for comparison.

Today the national figures for the incidence of tuberculosis indicate that approximately 55% of the new active cases reported are over the age of fifty. This portion of the population includes those who were exposed to tuberculosis early in the twentieth century when the incidence was much higher. These men and women are now in the age group where diabetes, upper respiratory infection, influenza, pneumonia and other chronic diseases is more common. In this group chest X-ray surveys as well as routine hospital admission films continue to be an important part of the periodic medical check-up. IS IT WORTH IT? The answer is "a thousand times yes'."

The early diagnosis of tuberculosis, cancer, enlarged heart, or other chronic chest diseases, permits early treatment to ensure the best results. As man's span of life increases, it becomes more and more evident that the added years are empty without the health to enjoy them. We should extend to all of our population the benefits of modern preventive medicine and early detection of disease.

Edward A. Piszczek, M.D., M.P.H.
President
Illinois State Medical Society

Teaching Machine for Diabetics

The Mark II Auto Tutor was used recently as a teaching machine for diabetic patients.[1] It looks like a small TV set but is in reality a special 35 mm. film projector with a close view projection screen. The script was prepared by specialists in the field. The project was conducted by the Medical Foundation, Inc., under contract to the Diabetes and Arthritis Program, Division of Chronic Disease, U.S. Public Health Service.

A random selection of 184 diabetic patients was used to test the efficiency of the machine. The majority learned and enjoyed it. It was of no value to the illiterate, language handicapped and those with poor vision. The method is of particular value to newly diagnosed diabetics.

The patient sits before the machine and reads a short discussion on a phase of diabetes. A question is asked at the bottom of the strip with three possible answers. If he pushes the button opposite the correct answer, the machine automatically advances to the next lesson. If the individual makes an incorrect choice, he is told why the answer is incorrect and is asked to push the button 'R' that brings back the original information.

Automated teaching is big business. There are 137 manufacturers and publishers in the field. Many medical schools, including the University of Illinois College of Medicine are exploring the potential of this method of teaching and are comparing the results of programmed instructional material with the standard lecture approach.

Teaching machines may prove to be a boon to the busy practitioner who does not have the time or staff to acquaint his patients with the details of their ailment. It has the advantage of being available at a time convenient to the patient. This type of automation makes sense. Those with chronic diseases, such as diabetes, are most likely to benefit.

T. R. Van Dellen, M.D.

[1]Nickerson, Hiram H.: A Teaching Machine for Diabetic Patients, J. Maine Medical Association 54:231 (Nov.) 1963.



Of 1,021 children with various confirmed infections... 950 or 93.0% were treated successfully with Signemycin®

Note:
The effectiveness of Signemycin was demonstrated by Chattas and his co-workers* who administered Signemycin to 30 children with serious staphylococcal infections resistant to commonly used antibiotics. Only one failed to respond. In each case the use of this drug was indicated by antibiogram. Those children treated with a nonselected antibiotic—for comparative purposes—took three times longer to recover.

Chattas, A. et al.: Antibiot. Med. 7:300, May, 1960.

Condition	No. of Patients	No. Cured with Signemycin
Eye, ear, nose, throat infections	368	343
Respiratory infections	369	346
Gastrointestinal infections	42	30
Skin and soft-tissue infections	38	37
Deep-seated or generalized infections	47	44
Various conditions	157	150
Totals	1,021	950 (93.0%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg. capsules (250 mg.)

Signemycin is also available as half-strength Capsules, preconstituted raspberry-flavored Syrup and Pediatric Drops

Brief Summary and Bibliography follow.

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SIGNEMYCIN®

Side Effects: Glossitis and allergic reactions, as well as severe anaphylactoid reactions, have been reported as rare side effects. Should significant reaction or idiosyncrasy occur, discontinue medication and institute countermeasures. Use of tetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. Reduce usual oral dosage and consider serum level determinations in patients with impaired renal function to prevent possible liver toxicity due to excessive accumulation of antibiotic in the serum.

Precautions: Overgrowth of nonsusceptible organisms may occur. In such cases, discontinue medication and institute appropriate specific therapy as indicated by susceptibility testing. Aluminum hydroxide gel given with antibiotics has been shown to decrease their absorption and is contraindicated. The coloring agents used in Signemycin Syrup and Pediatric Drops may produce red discoloration of stools.

Triacetyloleandomycin, a constituent of Signemycin, administered to adults in daily oral doses of 1.0 Gm. (3 Gm. Signemycin) for periods of more than ten days may produce hepatic dysfunction and jaundice. In the rare patient who requires this high dosage level of Signemycin initially, liver function should be carefully followed and dosage should be reduced, as promptly as possible, to the usual recommended range of 1.0 to 2.0 Gm. per day. Therefore, Signemycin is recommended primarily for the treatment of acute or severe infections, with treatment restricted to a ten-day period. If clinical judgment dictates continuation of therapy beyond ten days, serial monitoring of the liver profile should be carried out, including BSP, transaminase, and cephalin flocculation tests. Changes observed in liver function were reversible following discontinuation of the drug.

Formulas: Capsules: 250 mg. Signemycin (167 mg. tetracycline HCl and 83 mg. oleandomycin as triacetyloleandomycin).

Capsules: 125 mg. Signemycin (83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin).

Syrup: 125 mg. Signemycin (tetracycline equivalent to 83 mg. tetracycline HCl and 42 mg. oleandomycin as triacetyloleandomycin) per 5 cc.

Pediatric Drops: 100 mg. Signemycin (tetracycline equivalent to 67 mg. tetracycline HCl and 33 mg. oleandomycin as triacetyloleandomycin) per cc.

More detailed professional information available on request.

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Miltown®
(meprobamate)

...effective for control of anxiety and tension

- Relieves anxiety and tension without significant effect on alertness and reflexes—especially valuable in the working patient.
- Established and accepted—more than ten years' use, more than 1500 published papers confirm its value.
- Broad therapeutic range—may be used whenever anxiety and tension are present, with or without organic disease, in any age group from pediatric to geriatric.
- Relaxes both *physical* and *emotional* tension, thus helping to establish normal sleep patterns.
- Proven safety/efficacy ratio—low toxicity, minimal side effects, useful in long-term therapy.

Side effects: Slight drowsiness may occur and, rarely, allergic or idiosyncratic reactions, generally developing after 1 to 4 doses of the drug.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 or 2 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. coated tablets.

WALLACE LABORATORIES/Cranbury, N. J.



The Prospect of Immortality. Robert C. W. Ettinger. $3.95. Pp. 190. New York, Doubleday & Company, Inc. 1964.

The author proposes a change in our methods of disposing of the dead in order to ensure immortality. He suggests freezing and storage at a low temperature. Glycerol will be used to protect the frozen cells.

Mr. Ettinger admits that the best technique of suspended death has not been developed, but is bound to come with research. He believes that most of us now living have a chance for personal, physical immortality. If civilization endures, medical science should eventually be able to repair almost any part of the human body, including damage from freezing, senile debility, or other causes of death. This obviously cannot be done on the deceased who are cremated or are buried in the usual way.

Mr. Ettinger's book is stimulating and provocative. He follows up his unique idea with several chapters on the consequences should the plan be adopted. These include ways in which the super scientist of the future will repair and rejuvenate the individual in frozen sleep. What are the religious and legal aspects? Identity in 2000 A.D. may also be different along with the space required to keep billions of us frozen.

T. R. Van Dellen, M.D.

Approaches to the Study of Aphasia. Edited by Charles E. Osgood and Murray S. Miron. $5.00 Pp. 210. Urbana, University of Illinois Press, 1963.

This book is the product of an interdisciplinary conference on aphasia held in Boston between June 16 to July 25, 1958, in which a group of 40 clinical neurologists, psychiatrists, psychologists and linguists participated. Bringing together this interrelated group, one dealing with disorders of language disfunctions and the other with structure of natural languages was a fait accompli—for such orientation is seen rarely in the comprehensive approach to aphasia.

This small volume is not comprised of the usual symposium group of papers but is instead a well written, free-flowing report beautifully integrated, and the product of a series of informal discussions. There are six major headings: 1) Introduction, 2) Clinical Diagnosis and Treatment of Aphasia, 3) Neurological Theory and Research on Aphasia, 4) Linguistics and Aphasia, 5) Psycholinguistic Theory and Research on Aphasia, and 6) Summary and Prospectus.

As difficult as the concept of aphasia usually is as a language disturbance, in this book the readers can generally grasp cogent answers to questions as, what is aphasia? What makes up an aphasia in terms of component parts? Are there behavior disturbances correlated with this language disorder? Where are the lesion sites in aphasia? How, or does, the aphasic recover? What constitutes the speech of the aphasia? and what are the relations of normal language production to aphasia?

Although this book is directed to a multidiscipline approach by clinical neurologists, psychiatrists, and psychologists and written for them, it will appeal to the internist who encounters this language disorder so regularly.

Louis D. Boshes, M.D.

Radioactive Isotopes in Medicine and Biology. I. Physics. Quimby and Feitelberg. 2nd ed. Lea and Febiger, Jan. '63; and Radioactive Isotopes in Medicine and Biology. II. Medicine. Silver. 2nd ed. Lea and Febiger, Nov. '62.

The second edition of this very good reference work appears in two volumes for the first time. The increase in text is over 200 pages. Many illustrations have been added and/or changed.

Each of the authors has revised his or her section to include new, and modify old, concepts and practices. The increasingly important concepts of daughter decay and radioactive equilibrium are discussed in greater detail by Dr. Quimby. The most outstanding feature of either volume is Dr. Feitelberg's excellent chapter on basic measurements with radiation detectors guiding the veteran or beginner through recording statistics, digital and analog, in an intelligent and understandable fashion. Dr. Silver's previously outstanding presentation of diagnostic and therapeutic uses of I^{131} in thyroid disease has been enlarged considerably. Other sections on clinical Nuclear Medicine have been updated. Unfortunately, this book went to press prior to the development and refinement of current scanning techniques so this area is discussed only briefly.

Physicians who are engaged in the use of radionuclides in clinical practice will find these volumes valuable references.

J. L. Quinn, III, M.D.

PULSE
of the ILLINOIS STATE MEDICAL SOCIETY

A Service of the Public Relations Division *September, 1964*

ISMS Launches Billboard Fight Against Disease

Outdoor Health Drive Is Medical Society '1st'

The Illinois State Medical Society has launched an historic 12-month billboard campaign urging Illinois residents to protect themselves against the ravages of disease.

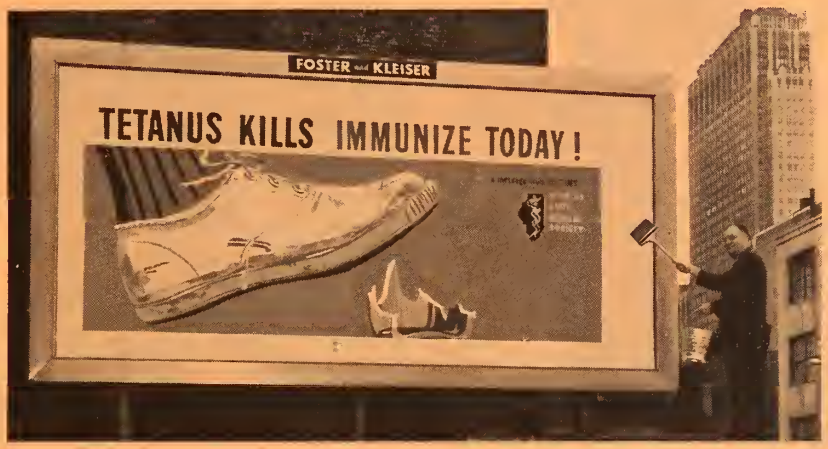
In a first-time cooperative effort with the outdoor advertising industry, the billboard posters promote immunization, chest x-rays and periodic medical examinations as safeguards against specific health threats.

The campaign—which features a different message each month—began in July with the theme "Tetanus Kills, Immunize Today." The subject for August was "Measles Cripples and Kills, Immunize Today." The September posters proclaim "TB Or Not TB —Only Tests Can Tell."

The cost for such a campaign normally would amount to more than $125,000. However, the ISMS has obtained the cooperation of 32 outdoor advertising companies which are providing free space on some 150 billboards throughout the state as a public service.

In addition, the remaining cost of printing the billboard posters is being underwritten by various voluntary health agencies, including the Illinois and Chicago tuberculosis associations and the Illinois and Chicago heart associations.

To achieve maximum coverage, ISMS also provides publicity materials on the subject for each month to newspapers, radio and television. The outdoor advertising education program is the first ever to be conducted by a medical society anywhere in this country.



Demonstrating his ability—as well as agility—with a brush and bucket of paste, Dr. Edward A. Piszczek, ISMS president, posts the first billboard message on the corner of Franklin and Wacker in downtown Chicago to officially launch the society's statewide outdoor advertising campaign against disease. County society presidents have been urged to follow Dr. Piszczek's example as a dramatic means to kick-off the monthly display of billboard health messages in their respective locales.

Health Messages Reach People 'On the Go'

The ISMS preventive medicine campaign—which has been brought into homes and businesses through radio, television and newspapers—is now reaching citizens "on the go."

The society achieved another "first" for the medical profession this month by placing special health messages in over 1,000 Chicago Transit Authority busses and subway trains.

The public transportation car cards are replicas of the 150 billboard posters throughout the state currently proclaiming: "Measles Cripples & Kills—Immunize Today."

This vehicle advertising program—estimated at a cost of close to $2,000—is free to the society. The CTA is providing the space without charge. Merck, Sharp & Dohme Pharmaceutical Co. underwrote the printing costs.



The above car card warning "Measles Cripples & Kills—Immunize Today" is being seen by thousands of passengers daily on CTA busses and subways. More than 1,000 of the health messages are displayed throughout the Chicago metropolitan area's public transportation system.

Local Physicians Urged to Accept Role in Community Health Week

Community Health Week, Oct. 18-24, will see the Illinois State Medical Society take the lead in encouraging citizens of all ages to participate in a regular program of exercise.

ISMS will launch a full-scale promotional effort featuring radio messages, newspaper ads and outdoor billboards. But—most important to the program—physicians are asked to provide personal leadership in their communities by displaying a colorful "Physical Fitness" pamphlet rack in their offices.

This free, eye-catching 12″x 18″ rack invites patients to "Get on the Health Team With Physical Fitness." One of the two pamphlets supplied describes a series of isometric exercises, prepared especially for ISMS.

The second pamphlet provides an order blank for complete literature available through the President's Council on Physical Fitness.

The rack and refills are available without charge by writing to Division of Public Relations, Illinois State Medical Society, 360 N. Michigan Ave., Chicago, Ill.

When ordering, physicians are urged to obtain an extra pamphlet rack for their local pharmacists to display on drug store counters. For maximum effectiveness, pamphlet racks should be ordered now and displayed immediately.



Baseball great Stan Musial faces the wind-up of Dr. SIMS on the Community Health Week Pamphlet racks to be displayed in physicians' offices and drug stores.

Send Coupon for Free Pamphlet Racks

Please send Illinois State Medical Society's Physical Fitness Pamphlet Rack, complete with pamphlets to:

NAME_____ M.D.

ADDRESS_____

CITY, STATE_____

Please send a second rack to me for my local pharmacist:

NAME_____ R.Ph.

ADDRESS_____

CITY, STATE_____

Mail to:

ILLINOIS STATE MEDICAL SOCIETY
360 North Michigan Avenue, Chicago, Illinois 60601

Slate Annual Conference on Nutrition in Medicine

The Conference on Nutrition in Medicine—annually sponsored by the Illinois State Medical Society and the Illinois Nutrition Committee—will be held Oct. 9 at the University of Chicago's Center for Continuing Education.

Co-sponsoring the event this year for the first time are the Illinois Dietetic Association and the Chicago Nutrition Association.

Representing ISMS on the planning committee are Dr. Paul Dailey and Dr. James Wilson.

For registration and information, write: Nutrition Committee, Illinois State Medical Society, 360 N. Michigan Ave., Chicago, Ill.

ISMS, Hospital Assn. Joint Conference Nears

The Sixth Annual Joint Conference of the Illinois State Medical Society and the Illinois Hospital Association will be held Sept. 17 at the Hotel Knickerbocker in Chicago.

The interests of insurance, public assistance, organized labor, government, industry, hospitals and medicine will be represented in the day-long session of presentations and workshop discussions. Registration is slated for 8:30 a.m. Co-chairmen of the conference are Dr. Noel G. Shaw, ISMS, and William R. Williams, IHA.

8th District Postgrad Program in Champaign

The Eighth District Postgraduate Program sponsored by the Champaign County Medical Society and ISMS will be held 12:30 p.m. Oct. 8 at the Champaign Country Club, 1211 S. Prospect Ave., Champaign.

Subjects will include "Chemotherapy in Malignant Disease;" "Progress in Practical Gastroenterology;" "Disease of the Kidney;" "The New Progestins;" and "Trends in Washington."

The program will begin with luncheon. Wives are invited to attend the fellowship hour and dinner, scheduled for 5:00 p.m.

Dr. SIMS Draws Record Crowds at State Fair

ISMS Symbolic Emissary Makes Debut Appearance

Dr. SIMS—the ISMS corporate symbol—drew curiosity, broad grins and unprecedented interest at this year's State Fair in Springfield.

Record-breaking crowds came in droves to meet Dr. SIMS at the "health fair within a fair," supported by the Sangamon County Medical Society, ISMS and AMA. Parents and children alike shook hands with the ISMS symbolic emissary portrayed by an exhibitor wearing a three-foot high, paper mache head of the stylized cartoon character.

He gave to throngs of youngsters some 5,000 balloons bearing the face of Dr. SIMS and the inscription: "Measles Cripples & Kills—Immunize Today." As balloons were being inflated in the exhibit area, waiting parents were given more than 5,000 measles pamphlets by volunteers of the Sangamon Women's Auxiliary. The pamphlets were provided by Merck, Sharp & Dohme Pharmaceutical Co. of West Point. Pa.

In addition, Auxiliary volunteers helped to distribute some 3,000 pounds of health information literature.

Also, weary Fair-goers who took advantage of the chairs in the exhibit's hospitality area were treated to a continuous sound and color slide film presentation depicting the creation, purpose and usefullness of Dr. SIMS.

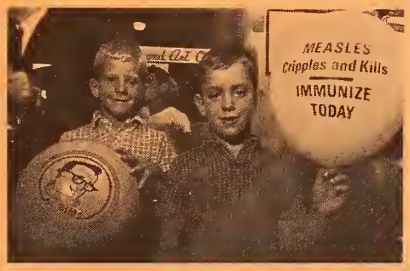
Supervising the health exhibit —which also featured a diet display and weight scale—was Dr. Jacob E. Reisch of Springfield, ISMS secretary-treasurer.

Health Exhibit a Hit With Kids, VIPs









Gov. Otto Kerner, left, beams broadly as he shakes hands with Dr. SIMS. At right, Charles Percy, Republican candidate in the Illinois gubernatorial race, stoops low to give a Dr. SIMS measles balloon to a delighted admirer. In the background displaying his obvious approval of the goings-on is Dr. Jacob E. Reisch of Springfield, ISMS secretary-treasurer.



41st Convention Sets Record

A record-breaking registration of 1,421 members and 989 children marked the 41st annual convention of the Woman's Auxiliary to the American Medical Association.

Mrs. C. Rodney Stoltz, Watertown, S.D., president, conducted the sessions which included:

*Amendment of the Bylaws to raise national dues to $2.00 a year, to cover expanded programs and communications between national and state and county levels.

*Presentation of $307,318.14, the Auxiliary's 1963-64 contribution to the American Medical Association Education and Research Foundation. AMA-ERF award winners were: California, largest contribution, and Tennessee, largest per capita contribution.

*A National Safety Council Award of Honor to the Woman's Auxiliary to the Medical Society of New Jersey for its statewide program on prevention of accidents and falls among the aging.

*Presentation of the first annual Health Mobilization Award, given by the Health Mobilization Division, Department of Health, Education and Welfare, to the Woman's Auxiliary to the Honolulu, Hawaii, Medical Society.

In her inaugural address Wednesday, Mrs. William H. Evans, Youngstown, Ohio, 1964-65 president, urged the Auxiliary to work for a better world through better health.

On Sunday afternoon, Mrs. Stoltz and Mrs. Evans were honored at a tea and Oriental fashion show. On Monday, the Auxiliary was hostess to representatives from 75 national voluntary women's organizations at a luncheon.

AMA President Edward R. Annis, M.D., was the guest speaker at the Tuesday luncheon.

Margaret N. Wolfe
Executive Secretary
Woman's Auxiliary to the AMA

A Delegate's View of the AMA Convention

I was impressed with the enthusiam of our officers, with their dedication to our purpose, with the endless task of learning, with the thrill of promoting the medical profession, and with the happy results from tasks accepted and fulfilled.

This neophyte felt privileged to have been chosen to fill the spot of a delegate, unable to attend. I came away convinced all auxiliary members have some part in helping the AMA and America.

Mrs. James W. Marshall
318 E. Boston Ave.
Monmouth, Ill.

WOMAN'S AUXILIARY
ILLINOIS STATE MEDICAL SOCIETY
ORGANIZED 1926
AUXILIARY NEWS

EDITOR
Mrs. Oliver Veneklasen
ASS'T EDITOR
Mrs. Theodore Proud

County Publicity Chairmen

Suggestions For Having Your Articles Printed

a. Use a typewriter, if possible, and double space all news.

b. A name must be—example: Mrs. W. E. Knaus or Mrs. William Knaus, never Mrs. Helen Knaus.

c. If the name of your member being featured is unusual, placing an "OK" above it assures the typesetter that this is the correct spelling.

d. In mailing your press releases, address should be Mrs. or Miss _____, Society Editor, never to "Editor."

e. Inviting local women editors to your luncheons or affairs establishes personal contacts resulting in co-operation with your news releases.

f. One affair could warrant two articles—one written as a future event with a photo of your hostess or program—one written with an "on the scene photo." You could invite the photographer from your local newspaper, or if you have a member who is adept with the camera, have her take photos and submit these to the newspaper, allowing them to make a selection.

g. Thanking the editor for articles printed always smooths the way to requesting another later.

h. A photo taken of your president or members donating time to any civic or charity affairs is very good public relations and the kind of publicity we are striving for.

i. Any of your members or delegates attending District, State or National meetings is very "newsworthy" to your local papers.

j. In the event there are two newspapers or two editions of a paper in your locale, one article can be written several ways: For instance: Mrs. Wm. E. Knaus to be hostess to Medics Wives; Mrs. Don Wright to address Medics Wives in the home of Mrs. Wm. E. Knaus; Hospital Drive subject of address to be given by _____ etc.

k. Should your society editor also have a column of her own, dropping a line to say you enjoyed the column will acquire a new friend and assure you an "open door."

l. Personally submitted publicity is a better policy than using the mails.

The general public is interested in what Medics and their wives do. Therefore publishing our many unselfish acts of charity and good deeds does help our Doctor husbands.

Please answer my "ad."

Sincerely,
Mrs. W. E. (Helen) Knaus
22 Country Club Acres
Belleville, Illinois

HELP WANTED—FEMALE

To fill and complete a Scrapbook of Press Clippings for our state president, Mrs. Willard Scrivner. This record is to be presented to her at the tenure of her office in May 1965 and is to consist of press releases of activities, invitations, photos from each County in the State of Illinois. All answers to this ad may be mailed to Mrs. Helen Knaus.



Rx Reviews and New Products

NEW DIAGNOSTIC ULTRASONOSCOPE

A diagnostic ultrasonoscope, the 'Ekoline 20,' is now available from Smith Kline Instrument Company, Philadelphia.

'Ekoline 20' can be used to detect shifts in the position of brain midline structures as a rapid, simple and safe screening process to determine the presence of tumors, hematomas and other space-occupying lesions and to measure the biparietal fetal head size in the uterus.

A medical adaptation of sonar, 'Ekoline 20' reduces the need for complicated and potentially dangerous techniques involving contrast media, arterial puncture and anesthesia in detecting brain lesions. Diagnosis with 'Ekoline 20' can be performed conveniently and easily anywhere in the hospital and involves no known danger to the patient.

'Ekoline 20' detects brain midline displacement by converting electrical energy into low-power sonic energy. Pulses of ultrasonic energy are sent through the skull, and whenever a pulse strikes a boundary between two substances of different acoustic resistance, such as the midline of the brain, a portion of the energy is reflected back to its source. The echoes are converted into electrical energy and the signal is displayed on an oscilloscope. 'Ekoline 20' is equipped with a camera to record the picture in ten seconds.

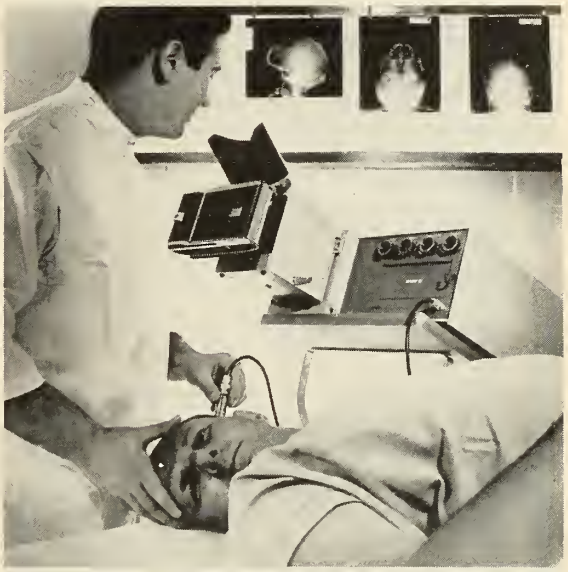
Measurement of the size of the fetal head with the 'Ekoline 20' helps the obstetrician with three problems —determining more accurately than ever before the probability of successful vaginal delivery in cases of suspected cephalopelvic disproportion, choosing the optimum time in terms of fetal maturation for elective termination of pregnancy and evaluating the advisability of intervention when the course of fetal growth is abnormal.

The instrument provides a measurement of the size of the fetal head by sensing the echoes produced when a low-power beam of ultrasound intercepts the walls of the fetal skull.

With the 'Ekoline 20' biparietal diameter of the fetal head can be determined quite consistently within two millimeters. Accuracy was evaluated by comparing ultrasonic predelivery measurements with postdelivery measurements by caliper.

Clinical experience and animal studies have demonstrated that because low power is used, examinations employing the recommended technique can be performed during the entire period in which measurements are usually feasible, from about the 30th week until term, without untoward effects or discomfort.

Operation of the 'Ekoline 20' is simple, and Smith Kline Instrument Company will train technicians to use it. The cost of the instrument is about $6,900. Samuel H. Gilbert, Jr., is Manager of Sales and Service.



Brain midline determination with the 'Ekoline 20' Diagnostic Ultrasonoscope produced by Smith Kline Instrument Company, 1500 Spring Garden Street, Philadelphia 19101.

ORAL CANCER DETECTOR

A nuclear stain known as toluidine blue may provide dentists with a simple method of identifying mouth cancers, Veterans Administration dental researchers report.

Doctors Harold H. Niebel and Bernard Chomet of the Chicago West Side Hospital, who have been conducting tests with the stain previously found successful in disclosing suspected uterine cervix cancers, have reported on their findings in the June, 1964, issue of the Journal of the American Dental Association.

When the stain is applied to a suspected area a blue coloration results if the lesion is malignant. This staining effect is also of help to the surgeon in determining the extent of the lesion. Routinely, however, a diagnosis of malignancy is confirmed by biopsy.

Small, non-malignant, traumatic ulcers sometimes confused the picture, Dr. Niebel, chief of the VA hospital's dental service, and Dr. Chomet, chief of the hospital's laboratory service, acknowledged in their pre-

(Continued on next page)

liminary report, but extra care in cleaning the area prior to testing reduces this possibility.

The article, titled "In Vivo Staining Test for Delineation of Oral Intraepithelial Neoplastic Change: Preliminary Report" outlines the staining procedure as follows:

"The lesion and surrounding mucous membranes are gently cleaned with a cotton swab saturated with one per cent aqueous solution of acetic acid. The mouth is rinsed thoroughly with water and the area to be stained is dried as well as possible. A second sponge, saturated with a one per cent aqueous solution of toluidine blue, is applied to the lesion and surrounding tissue. After several minutes, the mouth is rinsed and a third swab saturated in the acetic acid solution is used. Care must be taken to apply the acid lightly and uniformly in this decolorization process.

"The areas that stain most intensely will retain their color longest. Therefore, the early dysplastic lesion may stain but lightly, and too vigorous swabbing with acetic acid will eliminate the diagnostic tinctorial qualities. True distribution of the neoplastic epithelium becomes better defined after the second application of acid, when the non-neoplastic squamous epithelium becomes decolorized or retains only a small amount of stain."

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(PRALIDOXIME CHLORIDE) injection and tablets are now available on prescription for treatment and prophylaxis of poisoning with pesticides, chemicals and drugs having anticholinesterase activity. This drug is a specific antidote against parathion, TEPP and related agricultural chemicals.

May we suggest that you maintain a supply of PROTOPAM (pralidoxime) at hand at all times. Emergency Kit provides diluent, syringe and needle for emergency injection in field, factory or home.

No side effects have so far been reported in the clinical use of this drug. Prophylaxis is recommended, at present, only for short episodes because of incomplete information on tolerance to the drug when taken over prolonged periods. Regular orders through usual sources of supply.

IN EMERGENCIES: *telephone 212 AL 4-1140.*

CAMPBELL PHARMACEUTICALS, INC.
121 EAST 24th ST. NEW YORK, N.Y. 10010

VACUETTS PEDIATRIC Evacuant Suppository

What the Product Is: Pediatric rectal suppository containing sodium biphosphate anhydrous, sodium acid pyrophosphate, and sodium bicarbonate in a water soluble base of polyethylene glycols.

What It's for: Use as a bowel evacuant in most common types of constipation and functional megacolon. Vacuetts Pediatric also indicated for bowel retraining, cleansing of the lower bowel prior to administration of other rectal medication, or certain x-ray studies.

How It Works: When the Vacuetts suppository is inserted into the rectum, the water-soluble base disintegrates and the reaction between the released salts forms carbon dioxide. The gentle pressure of the expanding gas has a stimulating influence on the peristaltic and defecation reflexes. Also, the suppository base penetrates and softens the fecal mass as a further aid to evacuating efficacy.

Its Advantages: In most cases, Vacuetts completely supplant the use of enemas and harsh cathartics to empty the lower bowel. In more than 700 clinical trials, Vacuetts has proved to be safe, gentle and effective. Evacuation usually occurs in less than 30 minutes following administration. Slim design of the Vacuetts Pediatric suppository makes it easy to insert and eliminates the tortuous stretching of tense rectal muscles. Stool consistency is soft and no significant irritation of the mucosa has been reported.

How Administered: Children 2-12 years of age: Remove wrapper and moisten suppository in WATER for about 30 seconds. (Do not use mineral oil or petroleum jelly as a lubricant.) Gently insert one suppository well up into the rectum. Child should retain 15-20 minutes, if possible.

For bowel retraining, insert one suppository daily, after breakfast, for 7-10 days.

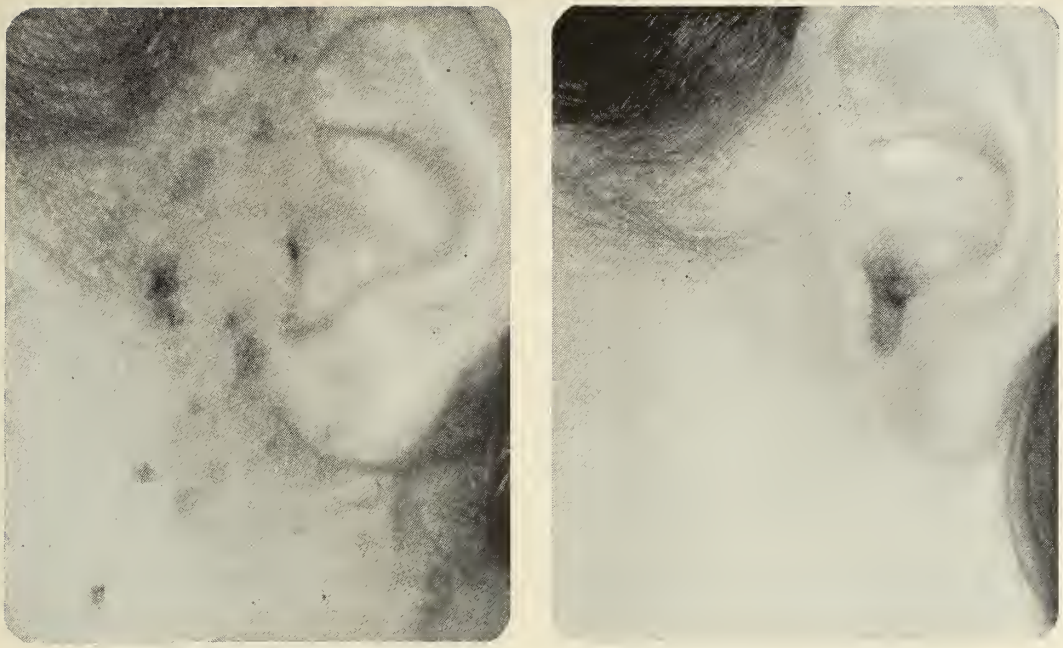
Warning: Rectal bleeding or failure to respond may indicate a serious condition. Physician should be consulted.

How It's Sold: OTC. In boxes of 12 suppositories individually wrapped in copper-colored foil, in shippers of 12 boxes. Vacuetts Pediatric are priced to the pharmacist at $2.00/dozen suppositories. Suggested retail price is $3.34/dozen.

Also available: Vacuetts Adult, in boxes of two suppositories individually wrapped in silver-colored foil, packed in cartons of six boxes.

Who Makes It: Dorsey Laboratories, a division of the Wander Company, Lincoln, Nebraska.

Introduced: August, 1964.



B. B., Age 10—atopic dermatitis all her life...and after two weeks of treatment.

Case History: B. B. is a 10-year old girl with a life-long history of atopic dermatitis. Previous diet therapy, lamp treatment, and antihistamine were of no avail. First photograph shows a severely excoriated, eczematized area with intractable pruritus. ARISTOCORT® Triamcinolone Acetonide 0.1% Cream was prescribed, and relief was obtained in 24 hours. Follow-up photo was taken two weeks later.

Effective in atopic dermatitis, eczematous dermatitis, seborrheic dermatitis and certain cases of psoriasis. The use of occlusive dressing in psoriasis will normally enhance effectiveness. The 0.1% Cream or Ointment is usually effective in abating symptoms of skin conditions responsive to topical triamcinolone, but the 0.5% Cream may be found preferable in more resistant cases. *Dosage:* Apply small quantity to area 3 or 4 times daily. *Side Effects* are rare. *Contraindications:* tuberculosis of the skin, herpes simplex and chicken pox. Use with care on infected areas. Supplied in 5 and 15 Gm. tubes and ½ lb. jars. Also available with Neomycin.

Aristocort® CREAM 0.1%, 0.5%
OINTMENT 0.1%
Triamcinolone Acetonide

Photographs courtesy of Orentreich Medical Group

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
278-3

Certification of Medical Assistants

One hundred sixty medical assistants throughout the country applied to take the second certification examination on June 26 and June 27, 1964. These assistants were seeking to become "Certified Medical Assistants." This title has already been earned by twenty four medical assistants from eight states, who passed the first test last Fall. The tests in June were given in Augusta Georgia, Bakersfield California, Milwaukee Wisconsin, Norman Oklahoma, Portland Oregon, San Francisco California and Brooklyn New York. Four medical assistants from Illinois (one from Chicago and three from Rockford) took the test in Milwaukee. Results should be forthcoming about the middle of September.

The examination is given on two consecutive days, the last Friday and Saturday in June. The location for the 1965 testing centers are not available at the present time. It is possible to have one in Illinois if we have at least ten applicants before November 1, 1964.

Te be eligible for certification testing, the applicant must be:

1. Be at least 21 years of age by February 1st.
2. Be a High School graduate.
3. Have a minimum total of three years experience in the office of a doctor of medicine, hospital or clinic.
4. Have at least twelve months continuous experience with one doctor, hospital or clinic.
5. Letter of reference from the present employer which should include opinions as to the applicant's readiness for such testing, work impressions and general capabilities. This letter should not accompany the application but should be mailed directly by the employer to:

   American Association of Medical Assistants
   510 North Dearborn St.
   Chicago 10, Illinois Attn: CEC

Fees

Application fee of $5.00 submitted with application (not refundable unless applicant is determined ineligible by Certifying Board.

Examination fee is $7.00 per section, payable upon receipt of notice of acceptance. (No refund of examination fee will be made unless notice of withdrawal is received prior to May 15, in which case one half the fee paid will be refunded or applied to examination in the following year at the option of the applicant. No refunds will be made until after July 1st.

Retakes

A candidate must take the entire examination for one of the two classifications on the first attempt. If at least two (2) sections are passed, the remaining sections may be repeated in a subsequent year upon payment of $7.00 for each section to be retaken. All five sections must be passed within a four year period in order to be considered for certification. No application fee is required on retake examination.

Making Application

Deadline date for return of application form is February 1st. Qualified applicants will be notified of acceptance and locations of test centers for current year by April 1st.

Preparing for the Examination

The examination is broader than most anyone's actual experience. Therefore some review of topics not recently studied in school or not included in their work experience will probably be necessary. If you are an applicant you may write to Mrs. Ethel Haase, IMAA Certification information Chairman, and she will send you a study outline of all sections of the examination, a list of reference books, and an application blank. Her address is:

Mrs. Ethel Haase, IMAA Certification
Information Chairman
8200 S. Blackstone
Chicago, Illinois



Outstanding

Improvement in ISMS Convention Ratings by Medical Exhibitors' Association

The long-range ISMS program to improve its convention was devised after the 1961 meeting. For this reason, the 1961 MEA ratings are used as the basis for the following comparison. By comparing the increase in "VG" and "O" ratings for 1961 and 1964, we find:

800% ↑ **increase for classification of meeting**

1964 - 80% over '63

132% ↑ **increase for suitability of the hall**

1964 - 35% over '63

200% ↑ **increase for physician interest**

1964 - 18% over '63

187% ↑ **increase for physician circulation**

1964 - 15% over '63

These figures show that—in the opinion of the exhibitors—much progress has been made since 1961. **Right now, even greater improvements are being planned to keep these ratings spiralling upwards year after year!**

NEWS and ANNOUNCEMENTS

Meeting Memos

September 27-October 2—The Flying Physicians' Association in its 10th Annual Meeting at the Riviera Hotel in Palm Springs, California. For complete registration information contact Albert Carriere, Inc., 332 South Michigan Avenue, Chicago, Illinois 60604.

October 10-14—The American College of Anesthesiologists will hold their Annual Meeting at the Americana Hotel in Bal Harbour, Florida.

October 14—The second in a series of lecture series under the general heading "Stress and Adaptation" will be presented at Forest Hospital, 555 Wilson Avenue, DesPlaines, a suburb of Chicago. Guest Speaker Kenneth L. Attis, M.D., Director of Research, Chestnut Lodge Research Institute, Maryland, and Discussant Clifton Rhead, M.D., will discuss "Human Behavior Under Stress II: Small Groups."

October 18-22—The Executive Board, Governing Council and House of Delegates of the American Nursing Home Association will meet in Miami Beach, Florida.

October 19-21—the 29th Annual Convention of the American College of Gastroenterology will be held at The Roosevelt in New York City.

In addition to the several individual papers to be presented, there will be Panel Discussions on Gastric Freezing and on Benign Diseases of the Esophagus; Symposia on Gastrointestinal Hemorrhage; Gastric Mucosa; an afternoon of Round Tables on various subjects, and Motion Pictures. There will again be scientific as well as commercial exhibits and the sessions will be open to all physicians without charge.

October 22-24—The Annual Course in Postgraduate Gastroenterology of the American College of Gastroenterology will be held at the Roosevelt Hotel and at the Mt. Sinai Hospital in New York City. Attendance at the Course will be limited to those who have registered in advance.

Copies of the program and further information may be obtained by writing to: American College of Gastroenterology, 33 West 60th Street, New York, N.Y. 10023.

(Continued on page 386)



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North Shore Hospital

225 Sheridan Rd.
WINNETKA, ILLINOIS
Hillcrest 6-0211

for information contact:
Milton A. Dushkin, M.D.
MEDICAL DIRECTOR

Fellowships

The Association of American Medical Colleges announced that Smith Kline & French Foreign Fellowships will be awarded by the Association again next year, for the sixth successive year. Applications will be accepted from medical students in U.S. schools for grants which will enable them to broaden their medical knowledge by serving in remote medical stations in underdeveloped areas of Africa, Asia, Latin America, and Oceania, for a period of at least 10 weeks.

Fellowship grants are available to students who have completed their junior year, with eligibility continuing through their senior year. Senior students must plan on carrying out their program before starting internship.

Descriptive brochures and application forms for the 1965 program have been mailed to all medical school deans. The closing date for submitting applications is December 31, 1964.

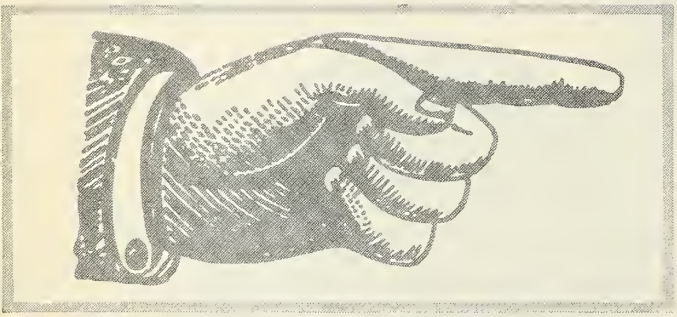
During the past five years, 152 students have been awarded grants from funds provided by the Smith Kline & French Laboratories, a Philadelphia pharmaceutical firm.

Appointments

Richard E. Gillock, former Assistant Administrator of Evanston Hospital has been appointed an Assistant Superintendent of the Hospitals and Clinics at the University of Chicago medical center.

He has also been named a lecturer on hospital administration in the University's Graduate School of Business.

As an Assistant Superintendent, Gillock will be responsible for the administration of the hospital section of the professional service departments in the medical center. These include the blood bank, radiology, anesthesiology, EKG, EEG, and BMR laboratories, inhalation therapy, physical therapy, occupational therapy, and the photographic department.


more physicians specify



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than any other vitamin A product when indicated in
ACNE
dry skin
keratosis follicularis
ichthyosis
pityriasis rubra pilaris
night blindness
metaplasia of mucous membranes

PG Courses

The Ames Company, Elkhart, Indiana, has announced that plans have been completed for "Symposium II—Blood Volume in Clinical Medicine" to be held October 30, 1964, at the International Hotel, Los Angeles, California. More than 400 physicians from the United States will discuss recent developments in blood volume measurement techniques and application of data to clinical medicine in the symposium sessions. George C. Henegar, M.D., Associate Professor of Surgery, Northwestern University Medical School, Chicago, Illinois, will serve as chairman. For further information, contact Dr. Henegar.

Northwestern University Medical School in cooperation with the Cook County Post Graduate School of Medicine is presenting a special one week course in Surgery of the Hand. The course is scheduled for the week preceding the Clinical Congress of the American College of Surgeons, September 28-October 2. The program will cover all aspects of Hand Surgery. It will be of special interest to the Plastic, Orthopedic, General and Industrial Surgeon. The first four days will consist of didactic presentations and discussions. The fifth day will be devoted to operative, out-patient and laboratory clinics. A renowned visiting faculty has been invited and will actively participate throughout the week. Attendance will be limited, and registrations will be considered in the order received. For further information, write the Registrar, Cook County Graduate School of Medicine, 707 South Wood Street, Chicago, Illinois 60612.

The Cleveland Clinic Educational Foundation's postgraduate course "Blood Bank Symposium" will be presented October 28 and 29. The course is co-sponsored by the Northern Ohio Red Cross Regional Blood Center. For complete information contact the Education Secretary, the Cleveland Clinic Educational Foundation, 2020 East 93rd Street, Cleveland, Ohio 44106.

(Continued on page 388)

physically — its microscopically fine **aqueous** vitamin A particles pass through the intestinal barrier more easily and may reach affected local area more readily through...
faster, more complete absorption

physiologically — provides all the known physiologically active isomers of the natural vitamin A complex which are believed to be directly utilizable in certain enzyme processes (in contrast to certain forms of synthetic vitamin A which require conversion in the body) for...
fully comprehensive results

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well tolerated and burpless

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Blood Vessel Surgery, One Week, October 19
Board Review Course in Surgery, Part I, November 9; Part II, December 7
Fractures & Traumatic Surgery, Two Weeks, September 21
Hand Surgery, One Week, September 28
Pediatric Surgery, One Week, September 21
Surgery of Stomach & Duodenum, One Week, September 21
Thoracic Surgery, One Week, September 28
Surgery of Face, Neck & Mouth, One Week, September 28
Gynecology, Office & Operative, Two Weeks, October 12
Vaginal Surgery, One Week, Sept. 14, October 26
Obstetrics, General & Surgical, Two Weeks, September 21
Board Review Course in Gyn-Ob, Two Weeks, October 26
Board Review Course in Medicine, Part I, September 21; Part II, November 30
Advances in Medicine, One Week, October 5
Hematology, One Week, October 12
Clinical uses of Radioisotopes, Two Weeks, October 5

Information concerning numerous other continuation courses available upon request.

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Obituaries

Victor J. Anderson, Chicago, died August 2, aged 71. In 1918 he had been a graduate of Loyola University School of Medicine.

Isaac E. Bartlett, Wheaton, died August 12, aged 53. In 1940 he graduated from Chicago Medical School and specialized in otolaryngology. He had been an active organizer of the Central DuPage hospital.

Louis J. Bennett*, Lawrenceville, a graduate of the University of Illinois College of Medicine in 1902, died July 21, aged 88. He was an Emeritus member and a member of the Fifty Year Club of ISMS.

Delbert R. Blender, Chicago, died February 3, aged 69.

Charles E. Boylan, Chicago, was a colon and rectal surgeon on the staff of Edgewater Hospital where he died August 10, aged 61. He was a graduate of the University of Illinois College of Medicine in 1931.

Philip F. Deaver*, Tuscola, a graduate of Chicago Medical School in 1946, died July 8, aged 44. He was a past president of the Douglas County Medical Society.

Paul A. Gannon*, Chicago, died July 20, aged 65. He was a graduate of Chicago Medical School in 1936.

David Holden*, Chicago, died July 16, aged 70. In 1917 he graduated from Jenner Medical College specializing in ophthalmology which he taught at Chicago Medical School. He was also on the staff of Mount Sinai and Franklin Boulevard hospitals.

Maximilian Kern*, Chicago, formerly of Austria, died July 31, aged 74. A graduate of the Chicago College of Medicine and Surgery in 1915, Doctor Kern was a widely known endocrinologist. He was a member of the American College of Cardiology as well as various other medical groups. He was an emeritus member of ISMS.

Harry Leventhal*, Chicago, a graduate of Chicago Medical School in 1940, died July 20, aged 57. He was a staff member of both Berg and Michigan Avenue hospitals.

Alphonse J. Manikas, Kankakee, died July 28, aged 55. He was a graduate of Loyola University School of Medicine in 1933 and was a staff member of Kankakee State and St. Mary's hospitals.

Douglas W. Mazique*, Chicago, died July 8, aged 55. In 1941 he was a graduate of Meharry Medical College, Nashville, and he specialized in ophthalmology and otolaryngology.

(Continued on page 390)

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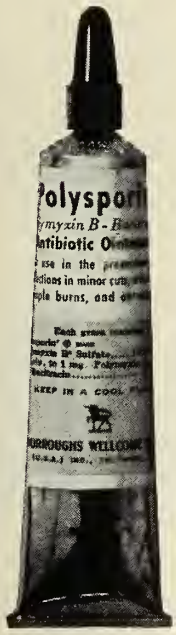
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Henry J. McCoy*, Dixon, died July 2, aged 73. In 1917 he graduated from the University of Illinois College of Medicine.

Albert H. Meier*, Evanston, died July 14, aged 61. He was a graduate of Northwestern University Medical School in 1937 and became an associate of medicine in 1943. He had been a staff member of Evanston hospital since 1942.

Fred M. Meixner, Peoria, died January 13, aged 80. A graduate of Northwestern University Medical School in 1911, he specialized in pulmonary diseases.

William J. Monilaw, Highland Park, died July 18, aged 89. He received his medical degree from Drake University where he began his career as an athletic director and founded the Drake Relays, the Missouri Valley Conference and the Chicago Suburban High School Athletic Conference.

Lenard C. Mulder, Evanston, was a graduate of Northwestern University Medical School in 1921. He was on the staff of St. Francis hospital and practiced for 43 years until retirement in 1960. He died August 2, aged 75.

Charlotte H. Nelsen, Chicago, a graduate of Loyola University School of Medicine in 1922, died April 29, aged 77. At the time of death she had been on the staff of Belmont hospital.

John W. O'Connor*, Oak Park, was a graduate of the University of Illinois College of Medicine, 1939 and chief orthopedic surgeon of West Side Veterans' hospital. He was a staff member of Garfield Park, St. Bernard's and St. Anthony's hospitals as well as being a member of national and international boards of orthopedic surgeons. He died July 22, aged 53.

Homer S. Parker*, Mount Prospect, died August 10, aged 58. In 1932 he graduated from Rush Medical College and specialized in pediatrics. He was a staff member of Resurrection, Cook County, Lutheran General and Northwest Community hospitals.

Walter G. Rahn*, Chicago, a graduate of Chicago Medical School in 1928, died July 22, aged 69. He had been a staff member of Evangelical hospital.

Lester Rice*, Evanston, died July 25, aged 44. In 1949 he graduated from Temple University School of Medicine, Philadelphia and specialized in internal medicine.

Paul G. F. Schmitt*, Chicago, died August 2, aged 67. In 1923 he graduated from Northwestern University Medical School and specialized in pathology. He was an A.S.C.P. board member, admitting physician at Hines hospital and retired from Cook County Coroner's Medical staff.

William B. Serbin*, Chicago, died June 15, aged 70. A graduate of Rush Medical College in 1921, Doctor Serin had been senior staff physician in obstetrics and gynecology at Wesley Memorial and assistant professor at Northwestern University School of Medicine since 1932. He was also a diplomate of the American Board of Obstetrics & Gynecology.

Neva Skelton, Eldorado, died August 10, aged 67. A graduate of Washington University School of Medicine, St. Louis, in 1923, Doctor Skelton was a general practitioner.

George J. M. Slawikowski, originally from Poland, died June 18, aged 31. In 1954 he was graduated from the University of Edinburgh, Scotland, with a degree in surgery. He later became dedicated to cancer research.

James R. Tweedy*, Colden, a graduate of St. Louis College of Physicians and Surgeons in 1905, died July 8, aged 84, after 56 years of medical practice. He was an Emeritus member and a member of the Fifty Year Club of ISMS.

John B. Vaughan, Oak Park, died August 7, aged 94.

Albert J. Zuska, Captain, U.S.N., died July 19, aged 48. A graduate of the University of Illinois College of Medicine in 1942, he became a psychiatrist in the Navy Medical Corps.

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IMJ

Illinois Medical Journal

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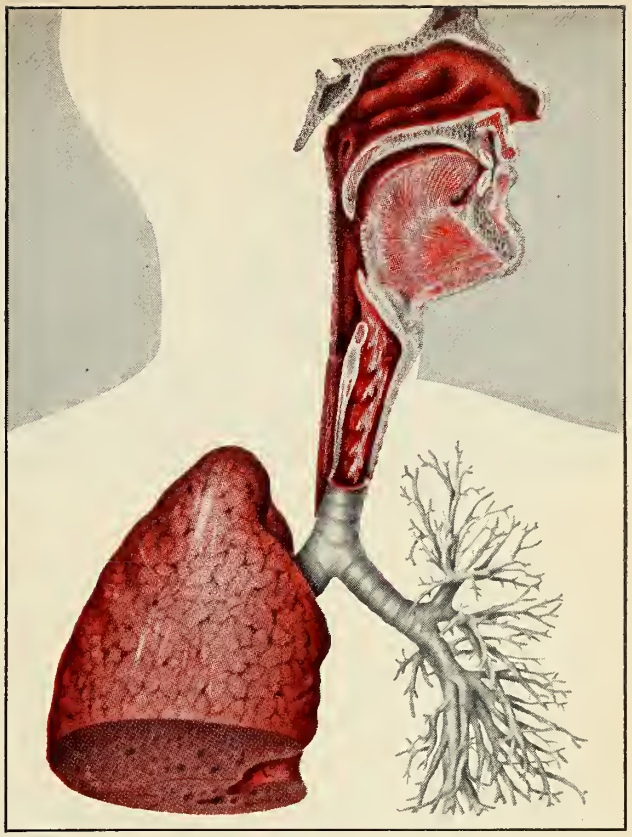


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AS I SEE IT FROM '360'

By Robert L. Richards
Executive Administrator

The Rewards of "Getting Involved"

Recently I was shocked and appalled at an article in a leading national magazine entitled "*Why Doesn't Somebody Care?*" The article described beatings, thefts, assaults and even murders committed in broad daylight—in front of scores of people. In most cases the individuals witnessing these crimes easily could have prevented them—but didn't. Why? Simply because they didn't want to "get involved."

As I read the article, it occurred to me that the problem of indifference not only relates to the public and to crime; it reaches out to touch every group in almost every area of our society— professional, political, and social. In relation to medicine, how many times have we avoided conflict in the political arena because we thought politics was "unprofessional?" How often have we turned the other cheek on biased, untrue, and sometimes even slanderous statements leveled at medicine simply because we "didn't want to get involved?" With only a brief search of our memories and conscience we know that the answer to these questions is "all too often."

This indifference is no less disastrous than standing by and doing nothing while a crime is committed. The only difference is that the crime is not being committed against someone else—but against ourselves.

There is no easy cure for medicine's indifference to its own political fate. It cannot be rectified by delegation; it relies upon the individual actions and attitudes of each physician.

Just how effective can this individual action be?

The answer is dramatically illustrated by a story appearing in *Pulse,* elsewhere in this issue. It concerns an ISMS member who objected to wholesale misstatements about Medicare made on a national television interview. By taking the time to send a telegram to the producers of the show (reproduced in the *Pulse* article), this ISMS member helped to set the wheels in motion for a second show which corrected the misconceptions of the earlier one. As a result, ISMS headquarters was swamped with calls from citizens to learn more of the facts.

This significant achievement took place largely because *one* individual took the time and effort to "get involved." If we *all* took the time —and employed the effort—no conceivable force could ever threaten the goals and standards that have made ours the finest system of medical care on earth.



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Bone and joint infections	71	64
Deep-seated or generalized infections	257	251
Obstetrical & gynecological infections	341	320
Miscellaneous conditions	592	570
Totals	5,057	4,731 (93.5%)

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Abstracts of Board Actions

Meetings of September 19-20, 1964

BASIC SCHEDULE FOR 1965 CONVENTION APPROVED

ISMS and the Woman's Auxiliary will open the 1965 convention with a combined memorial service on Sunday, May 16. The House of Delegates will meet on Sunday, Tuesday and Wednesday afternoons. Scientific sessions and Auxiliary programs will be scheduled Monday through Wednesday, with a buffet Sunday evening, Public Affairs dinner Monday, and banquet on Tuesday. Exhibits will be open from 11 a.m. Monday until 5 p.m. Wednesday.

40 PHYSICIANS NEEDED TO REPRESENT ISMS

Each ISMS district is being asked to send four doctors to the Third Conference on Physicians and Schools Dec. 3 at the St. Nicholas Hotel, Springfield. ISMS is sponsoring the conference with the Illinois Education Association, Illinois Department of Public Health, Illinois State Dental Society, and the State Superintendent of Public Instruction. It will be open to all physicians.

ISMS VIEWS PRESENTED TO DEMOCRATIC PLATFORM COMMITTEE

Dr. Frank J. Jirka, Jr., appeared before the resolutions and platform committee of the Democratic National Convention Aug. 17 to present views of the Illinois State Medical Society. Copies of Dr. Jirka's statement may be had by writing ISMS.

CONTINUING EDUCATION PROCEDURES CHANGED

County societies will be requested to extend their own invitations to speakers for continuing education programs after Jan. 1. ISMS will continue to provide a roster of available speakers, send out notices, and pay the speakers. It is thought that if the local program chairman chooses and invites the speaker, he will feel more responsibility for receiving the speaker and for working on a good attendance.

CHANGES IN COMMITTEE ROSTERS ANNOUNCED

ISMS members are advised to make the following changes in committee rosters appearing in the Annual Reference Issue (August) of the *Illinois Medical Journal:* Norris Brookens replaces I. E. Bartlett as chairman of the Committee on Medical Economics and also on the Liaison Committee to Blue Cross-Blue Shield; Clark Mangan, Jr., added to the Committee on Environmental Health.

CIGARETTE ADVERTISING TO BE DISCONTINUED

No cigarette company exhibits will be accepted for the 1965 annual meeting and no new cigarette advertising will be accepted by the *Illinois Medical Journal* after current contracts expire.

(Continued on page 416)



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Abstracts of Board Actions

(Continued from page 414)

INSURANCE QUESTIONNAIRES CRITICIZED

Legal Counsel advises that physicians refrain from answering "opinion" question on automobile insurance applications of older citizens. Efforts will be made to have the Health Insurance Council review forms presently being used and recommend appropriate changes.

REPRESENTATIVES TO OTHER GROUPS APPOINTED

Representatives to the ad hoc Committee on Nursing Care of the Chronically Ill and Aging of the Illinois League for Nursing are Henry T. Ricketts, Aging, and Henrietta Herbolsheimer, Nursing. A new Committee to Revise Birth Certificates and Forms for Fetal Deaths consists of H. Close Hesseltine, chairman, Newton DuPuy, and Jacob E. Reisch. Harlan English will represent ISMS on the Professional Advisory Committee of the Hospital Planning Council of Greater Chicago. In addition, representatives are to be named by each county in the greater Chicago metropolitan area.

ISMS STATES POSITION ON BLOOD BANKS

The Board of Trustees has re-affirmed its support of the AMA House of Delegates position statement on blood banks which condemns the establishment or activation of new blood procurement facilities without prior approval of the county medical society involved. County medical society approval is assumed to have been predicated on appropriate surveys of existing facilities and anticipated needs so that wasteful and unnecessary duplication may be avoided.

ISMS and IHA EXPLORE COST OF HOSPITAL CARE

The cost of hospital care was explored in depth by about 300 chiefs of medical staffs, hospital administrators and trustees Sept. 17 at the Sixth Annual Joint Conference of ISMS and the Illinois Hospital Association.

Dr. Noel G. Shaw, co-chairman of the conference, presided over the morning session where speakers discussed the internal and external elements affecting costs and described some experiments in controlling costs.

Richard G. Hershey, Illinois Director of Insurance, addressed the group at luncheon on "Our Insurance Department's Role."

The afternoon session was divided into eight workshops moderated by representatives of public assistance, Blue Cross, commercial insurance, organized labor, legislature, hospital trustees, government hospitals, and industry.

The success of the meeting was indicated by the attentive audience, participation in discussion and the large number who remained until the conference adjourned at 4 p.m.

IMJ

Illinois Medical Journal

volume 126, number 4 october, 1964



Cryotherapy in Ophthalmology

John G. Bellows, M.D., Ph.D., *Chicago*

In view of the current interest in cryosurgical techniques in all fields of medicine, it is ironic that the first application of supercooling techniques in the field of ophthalmology was overlooked for almost thirty years. In 1934, Bietti[1] used solid carbon dioxide in treating retinal detachment but—largely because of the poor conditions for research in Italy and Germany in the 30's—never followed up his early findings. In 1950, Bietti[2] went a step further by applying solid carbon dioxide to the scleral region of the ciliary body for the treatment of glaucoma.

Today, we are becoming more and more aware of the potential value of cryogenic therapy in several fields of ophthalmic surgery: glaucoma, cataracts, retinal detachment, "Coats" disease, proliferating retinopathy, aneurysms of the retinal arteries, hemangiomatosis of the retina and chemical burns of the cornea.[3]

Although supercooling has been used to preserve the cornea without any impairment of its transparency, we still know very little about the biophysical, biochemical and physiological effects of low temperatures on ocular tissues and fluids.

From among the various cryogenic agents available for use in ophthalmology, liquid nitrogen and solid carbon dioxide have been found to be of the greatest value. Neither liquid oxygen nor liquid hydrogen are suitable, because of their flammable and explosive qualities. Liquid helium produces a temperature much lower than is needed, and it is not readily available.

Within the past few months, we have developed two cryogenic instruments: a cryoapplicator utilizing liquid nitrogen, and a cryoextractor using solid carbon dioxide. In both cases, the pen-sized instruments contain their own supply of the supercooling agent within suitable insulating material. Experimental and clinical experiences have shown that the cryoapplicator using solid carbon dioxide is chiefly used for the extraction of cataracts, while the instrument using liquid nitrogen is not only suitable for cataract extraction, but is very effective for the treatment of glaucoma, retinal detachment, proliferating retinopathy, "Coats" disease, hemangiomatosis of the retina and chemical burns of the cornea and to obliterate vessels in old corneal scars.

From the Department of Ophthalmology, Northwestern University School of Medicine, Cook County Hospital, St. Joseph Hospital, Chicago, Illinois.

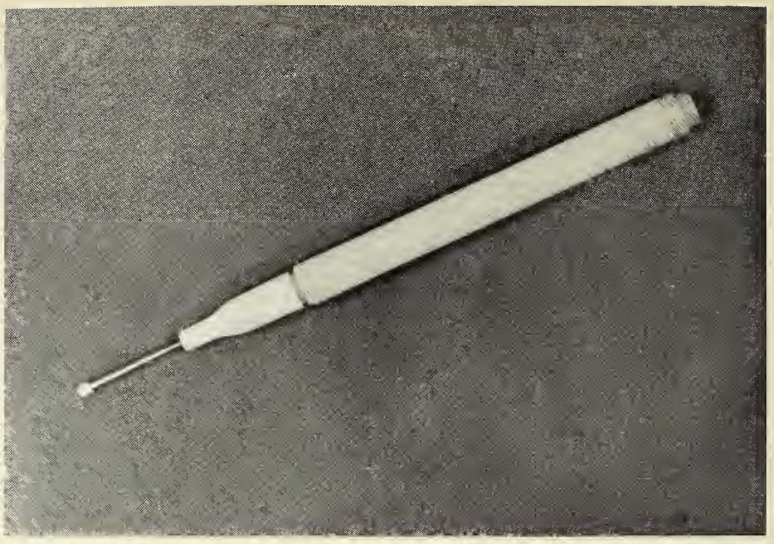


FIGURE 1. Cyro-extractor using liquid nitrogen composed of inner teflon and outer nylon tubes with a copper rod insertion.

Description of the Instrument

The instrument using liquid nitrogen consists of three tubes, separated by air spaces. The innermost tube is made of Teflon, the middle tube of nylon, and the outermost tube of brass. The low temperature of liquid nitrogen (−196° C) is transmitted through a copper tip, one end of which is inserted into the nitrogen and the other end suitably shaped for application to the eye. The teflon, nylon and the air spaces between them act as insulating materials so that the instrument can be held comfortably in the hand (Figure 1).

Through experiments I have found that liquid nitrogen produces minute ice crystals that have no adhesive power. By contrast, solid carbon dioxide (−69° C) yields larger ice crystals with marked adhesive properties. We have been able to utilize both of these divergent properties in ophthalmic surgery.

Glaucoma

The use of cryocyclotherapy (the application of supercooling agents to the ciliary body) aims at the reduction of aqueous output. It differs from diathermy in that congelation of the tissues occurs rather than coagulation, and the effects are milder and partially reversible. However, as in diathermy, the process may be repeated; and an incision is not necessary, although in cyclodiathermy the needle does penetrate part way into the sclera.

The hypotony occurring several days following cryocyclotherapy is explained on the basis of a decrease in the aqueous output. According to Bietti, histological examination showed that within a few hours there was a marked edema and congestion of the ciliary body. Within a few days, these phenomena decreased gradually, and after a few weeks only minute changes could be detected microscopically.

Permanent improvement was attributed to the atrophy of the ciliary body, and to changes in the ciliary epithelium and ciliary nerve supply. Postoperatively, the immediate response was an increase in intraocular tension, followed by a gradual reduction in tension, reaching its low point in seven to ten days. This, in turn, was followed by a slow return of tension to a point slightly below the original level. If it were necessary to lower tensions further, it would be possible to repeat the procedure, using the other quadrants of the globe.

Operative Procedure

The patient receives the usual preoperative sedation; both block anesthesia (akinesia and retrobulbar injection of Carbocaine) and surface anesthesia tetracaine hydrochloride are applied. The tip of the cryoapplicator containing liquid

nitrogen is placed directly on the conjunctiva in the region of the ciliary body approximately 4 mm. from the limbus of the cornea. A total of eight such applications are made; e.g., four on the upper lateral and four in the lower lateral quadrants. Twenty seconds has been found to be the adequate time of contact to produce the desired effect on the ciliary body.

Postoperative Course

On the first postoperative day there is edematous swelling of the counjunctiva, with a moderate degree of pain which is readily controlled by the use of analgesics. Intravenous acetazolamide (500 mg.) is administered to reduce the transient postoperative increase in intraocular tension that follows. The appearance of cells and a luminous beam in the anterior chamber on the second day is an indication for the brief use of mydriatics. Within five to seven days the inflammatory phenomena subside and the intraocular tension is found to be decreased by 10 to 20 points on the Schiotz tonometer.

This operative procedure is of value in glaucoma where the surgeon seeks only a moderate degree of reduction in intraocular tension or where a cutting operation is contraindicated, as in the patient receiving anticoagulants.

Retinal Detachment

Experiments indicate that the application of supercooling techniques is effective in the treatment of holes and tears in the retina, uncomplicated by the presence of subretinal fluid. Here, it can very well take its place along side of photocoagulation, and has advantages over the latter in that it does not require expensive equipment and the retinal response is of a milder type. The prime indication is the prophylactic treatment for tears before the retina actually becomes undermined and elevated by subretinal fluid.

Operative Procedure

The usual preoperative sedation is administered and then the cryosurgical procedure may be performed under local anesthesia. As in the treatment for glaucoma, no conjunctival incision is necessary, except for the lesions in the more distant posterior areas. The retinal tear is observed with the indirect ophthalmoscope while an assistant applies pressure on the outside of the globe with a probe in the region of the hole until the precise area to be congealed is located. This area is marked with gentian violet. Using indirect ophthalmoscopy for observation and control the surgeon applies the cryoapplicator containing nitrogen to the point marked on the sclera or conjunctiva until the proper degree of congelation is produced. This is determined by the intensity and extent of the blanching of the retina and obliteration of the retinal markings and vessels.

Postoperative Course

Upon removal of the cryoapplicator from the operative field, both the sclera and retina rapidly resume their former appearance. The sclera itself shows no permanent change. However, within 10 to 14 days, pigmentary proliferation appears in the congealed areas of the retina, indicating that the desired adhesive chorioretinitis and sealing of the retinal tear has taken place.

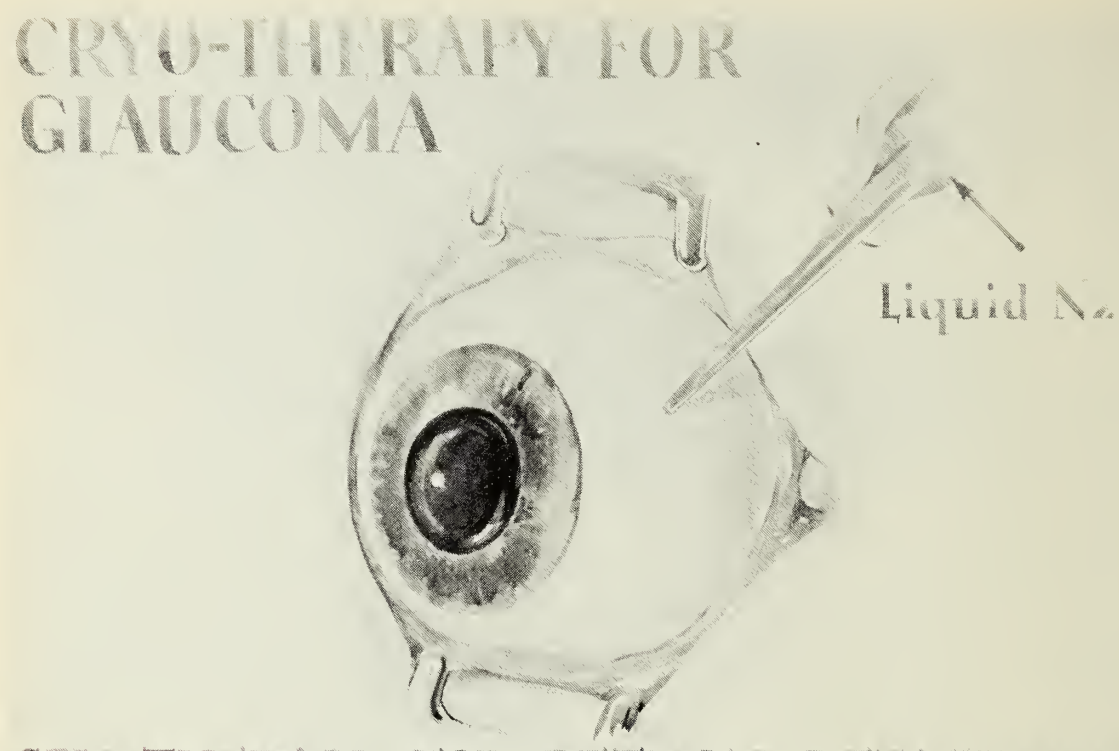
Vascular Lesions of the Retina

The application of supercooled agents may also be made to the sclera in the treatment of proliferating retinopathy, "Coats" disease, and hemangiomatosis of the retina. The object of cryotherapy in these retinal conditions and in the vascularized cornea is to obliterate newly-formed vessels, aneurysms and other localized vascular lesions. Cryotherapy for these diseases is effective and yet less traumatizing than electrocoagulation and photocoagulation.

Chemical Burns of the Cornea

Experimentally produced alkali and acid burns of the cornea in rabbits were treated by supercooling the injured area with the cryoapplicator containing liquid nitrogen. The immediate congelation of the involved area of the cornea prevented diffusion of the noxious agent both in depth and extent.

This suggests a clinical application in the treatment of chemical burns in that, if this type of cryoapplicator were generally available its use would provide sufficient time for procuring the proper neutralizing agent.



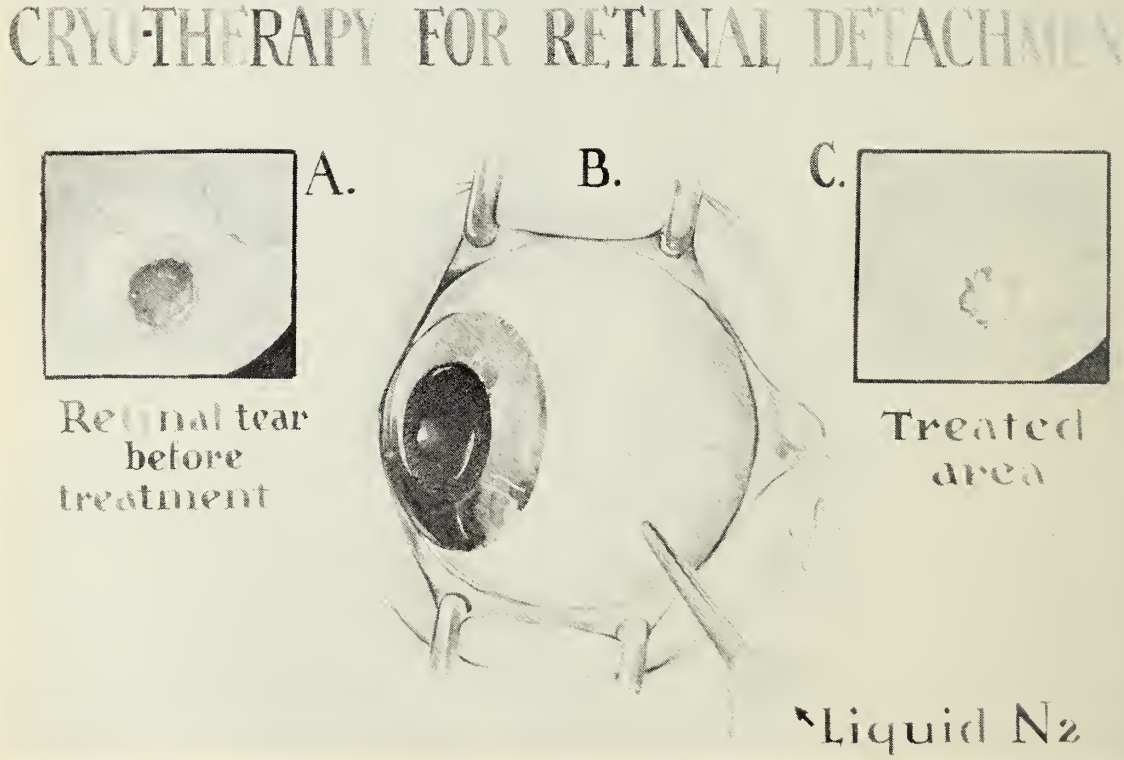


FIGURE 2A. Cryocyclotherapy using liquid nitrogen applicator for the treatment of glaucoma.

FIGURE 2B. Cryotherapy for retinal detachment using liquid nitrogen applicator.

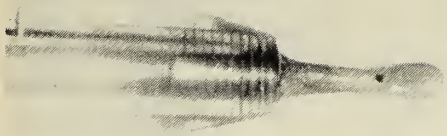


FIGURE 3. Cryoextractor using solid carbon dioxide. Note vent on upper surface for escape of vaporized carbon dioxide.

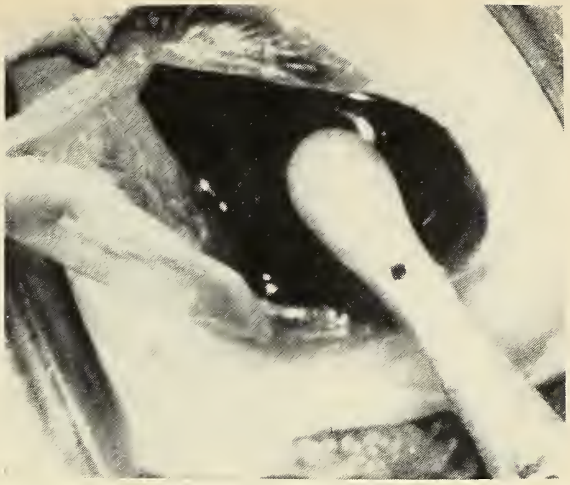


FIGURE 4. Raising of corneal flap and the application of the cryoextractor using solid carbon dioxide.

Cataract [4-6]

Over the past year, I have performed more than 50 cataract extractions using the cryoextractor containing solid carbon dioxide, with excellent results. There has not been a single instance in which the capsule was ruptured.

This technique of cryoextraction has advantages over the standard technique (utilizing a forceps or erisophake) in that it enables the surgeon to work without the aid of a skilled assistant, eliminates the need for a second operative procedure to remove lenticular remnants, requires a minimum amount of point pressure and makes the use of enzymatic zonulolysis unnecessary. With this cryo-extraction technique and the elimination of capsular rupture the complications resulting from lens remnants in the anterior chamber is eliminated. Since these remnants are considered a good culture media, postoperative infections are reduced and reactions to lens proteins with resulting anaphylactic endophthalmitis are no longer a problem.

This operative procedure is a refinement on the method reported in 1961 by Krwawicz[7,8] who dipped a probe in a mixture of solid carbon dioxide and alcohol. This new cryoextractor maintains its supercooled temperature for much longer periods than the Krwawicz probe.

An elaborate and expensive cryogenic device has also been employed by Kelman and Cooper,[9] consisting of a large monitoring-and-storage unit, and a long canula with an applicator.

The cryoextractor I have used is inexpensive and compact—about the size of a fountain pen. It is easily manipulated, and has its own self-contained carbon dioxide supply. It is eminently suited to the extraction of intumescent cataracts, which have posed a major problem for the ophthalmic surgeon.

The cryoextractor we have used is inexpensive plastic tube and plunger, and a tapered hollow copper tip. The end of this tip is enlarged into a 2 mm. disc. A vent in its upper convex surface permits the escape of the vaporized carbon dioxide. The under-surface is concave, to conform to the curvature of the lens. The entire tip is insulated with a thin layer of epoxy adhesive which acts as an insulating material and does not permit adherence to any extraneous material (Figure 2).

Operative Technique

The usual preoperative and operative cataract procedures are carried out, substituting the cryoextractor for the forceps or erisophake for the extraction of the cataract.

The supercooled tip of the extractor is applied to the moist anterior surface of the lens. Within 15 seconds, it becomes firmly adherent with the depth of congealment penetrating 2 to 3 mm. into the lens substance and extending for 2 mm. around the perimeter of the tip.

The lens and the adhering surface of the tip become fused into a single unit, so that no difficulty is encountered in extracting the intact lens by making a few rotary movements to free the lens from the zonules, and then withdrawing the instrument. The completion of the operation is performed in the usual manner.

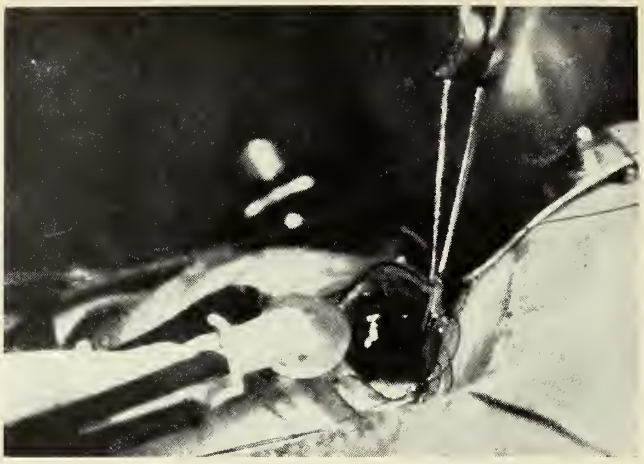


FIGURE 5. Removal of mature cataract in a 78-year-old patient with cryoextractor using liquid nitrogen.

Summary

Cryogenic operative techniques have been found to be of value in the treatment of certain ocular diseases. Two new instruments have been developed: a cryoapplicator utilizing liquid nitrogen and a cryoextractor utilizing solid carbon dioxide. Both instruments are efficient, compact, inexpensive and contain their own supply of the supercooling agent. Reduction in the intraocular tension is readily achieved by simply applying the supercooling agent to the region of the ciliary body. The treatment of retinal tears, aneurysmal dilatations of the retinal vessels, hemangiomatosis of the retina and proliferating retinopathy is simplified. Cryoextraction of cataracts by eliminating the incidence of capsular rupture does away with the need for discussion of secondary membranes, eliminates the complication of phakoanaphylactic, endophthalmitis and reduces the incidence of postoperative infections.

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ISMS Legislative Conference

The Illinois State Medical Society will hold its annual one-day Legislative Conference on Sunday, Nov. 8, 1964 at the Drake Hotel in Chicago, Ill.

This Conference is designed to provide total legislative orientation for legislative committee chairmen, committee members, county and branch society officers and other physicians involved or interested in the legislative process.

Conference Chairman, J. Ernest Breed, M.D., has arranged a stimulating and informative program. Wives are invited to attend.

Tonometric and Tonographic Features of Early Open Angle Glaucoma

Alex E. Krill, M. D., *Chicago*

Data by leydecker suggest that there is a lapse of more than one decade from the beginning of the pathological increase of intraocular pressure to the manifestation of visual field loss.[1] Thus glaucoma, as we know it with typical optic nerve and visual field changes, is probably the result of years of insult to the optic nerve.

Early open angle glaucoma is the phase before visual field changes develop. It is in this phase that we have the best opportunity of preventing damage to the optic nerve by the use of drugs to lower the intraocular pressure. We have designated this early stage as tonometric open angle glaucoma and the stage with definite optic nerve and visual field changes as overt open angle glaucoma. Both stages are characterized by intermittent or constant measurement of intraocular pressure greater than 24 mm. Hg.

The two questions which concern the doctor are: (1) What are the most reliable criteria which distinguish an eye with tonometric glaucoma from a normal eye? (2) Is there any way in which we can predict the likelihood or the rapidity with which an eye with tonometric glaucoma will develop field changes? The answer to the second question should guide our therapeutic course of action.

A comparison of both outpatient[2] and inpatient[3] tonometric and tonographic data from normal, tonometric, and overt glaucoma eyes will show the best criteria to distinguish a glaucomatous from a normal eye.

1. *Ocular Tension Parameters.*

a. Absolute values. A tension greater than 24 mm. of Hg is rare in a normal eye under any circumstances (Table 1). Ocular tensions between 22 and 24 mm. of Hg are occasionally seen in normal eyes, but are more likely to be from glaucomatous eyes. An ocular tension below 25 mm., or even below 22 mm., does not rule out glaucoma. Furthermore, the likelihood of obtaining an abnormal ocular tension is less in the hospital. This dampening phenomenon is well known.[4] In addition, the time of measurement is of importance. In all eyes the greatest frequency of maximum daily tensions measured are in the morning; however, in the glaucomatous eye there is also a good likelihood of obtaining a maximum ocular tension at other times of the day.[5] One should stagger the time of visit of glaucoma suspects or known glaucoma patients.

b. The daily fluctuation of intraocular pressure. A small percentage of normal eyes will

From the Eye Research Laboratories, The University of Chicago.

This work was supported in part by a grant from the L. B. and E. M. Kuppenheimer Research Fund.

TABLE 1

	N	No Measurements	P > 21	P > 24	C < 0.18	C < 0.13	$P_0/C > 100$	$P_0/C > 138$
			Diagnostic Criteria in Open Angle Glaucoma					
Normals								
(outpatient)*#			2.5%	.15%	2.5%	.15%	2.5%	.15%
(inpatient)	60	575	2.0%	0	18.0%	1.0%	5.0%	.5%
Tonometric Glaucoma								
(inpatient)	36	360	27.0%	14.0%	33.0%	35.0%	77.0%	51.0%
Overt Glaucoma								
(outpatient)#	600	600	55.0%	35.0%	66.0%	45.0%	74.0%	51.0%
(inpatient)	24	219	10.0%	22.0%	33.0%	47.0%	77.0%	54.0%

*Number of subjects not indicated

#From Becker, B. and Shaffer, R. N.: Diagnosis and Therapy of the Glaucomas, St. Louis, C. V. Mosby Co., 1961.

show daily fluctuations of ocular tensions greater than 5 mm. of Hg (Table 2), but it is quite unlikely that a fluctuation greater than 10 mm. of Hg will be found in a normal eye.[5-7]

c. Difference in intraocular pressure between the two eyes. It is unusual for two normal eyes to show a pressure difference at any time greater than 5 mm. of Hg (Table 2). Note that one-fifth of the measurements from both tonometric and overt glaucoma subjects show a difference greater than 5 mm. Hg between the two eyes.

2. *Facility of Outflow (C) Parameters.*

a. Absolute values. A low C is a more constant finding in a glaucomatous eye than a high ocular tension. A C below .13 is rare in normal eyes, but is common in glaucomatous eyes (Table 1). Facility of outflow values between .17 and .13 are either from normal or glaucomatous eyes, but are more likely to be from the latter.

b. Glaucoma index. The most constant finding the glaucomatous eye, tonometric or overt, is the abnormality of the glaucoma index (P_0/C) (Table 1). Three out of four glaucomatous eyes will show this abnormality or about three out of four measurements from a glaucomatous eye will show an index greater than 100 (Table 1).

It is apparent, regardless of the criteria used, that a glaucomatous eye may show normal measurements at times. Therefore, glaucoma cannot be ruled out with certainty on the basis of one or two measurements, particularly when these measurements are ocular tensions. These data indicate that glaucoma both in the early and advanced stages is a disease showing fluctuation of tonometric and tonographic parameters.

3. *Stress Tests.*

a. Water provocative. The most frequently used test to bring out a tonometric or tonographic abnormality in glaucoma suspects is the water drinking provocative test. A liter of water is drunk by the patient in five minutes after a night of no food or water. A positive test consists of a rise in pressure greater than 8 mm. of Hg in about 40 to 45 minutes or an increase in the glaucoma index to more than 100. With the

TABLE 2

Group	No. of Subjects	No. of Test Days	Diurnal Tension Fluctuation* 6-10	11 or more	Difference between two eyes greater than 5 mm. Hg
Normal	30	172	5%	0	2%
Tonometric Glaucoma	18	117	11%	3%	21%
Overt Glaucoma	12	83	6%	11%	20%
Other Glaucoma	32	32	22%	9%	41%

*mm. of Hg

last criteria, a greater percentage of glaucoma eyes will be detected.[2]

b. Steroid provocative test. Becker has shown that subjects with open angle glaucoma, or carriers of the gene for this disease, will show a significant rise in ocular tension and a decrease in the facility of outflow after three to six weeks of treatment with a topical steroid such as betamethasone.[8] After this type of treatment almost 96 per cent of definite glaucoma eyes showed tensions greater than 21 by applanation tonometry, 98 per cent of the subjects showed outflow facilities less than .18, and 100 per cent of the subjects showed glaucoma indices greater than 100. The exact criteria for positive tests remains to be worked out (particularly, in distinguishing a subject with definite disease from a carrier of the disease).

Undoubtedly most doctors would treat an eye with numerous tensions in the high 20's or low 30's. However, the decision to treat an eye demonstrating intermittent ocular tensions in the middle 20's may be difficult to make. Some of the criteria that can be used in borderline patients are as follows:

1. *Typical visual field changes in one eye.* There is a good possibility that the second eye will develop similar changes, therefore, we would want to use some type of therapy in both eyes.

2. *Family history of overt open angle glaucoma.* Because of the hereditary nature of the disease, we would assume that there is a good probability of a similar course in relatives showing only tonometric glaucoma.

3. *Patients with any of the following diseases:*

a. Hypertension under treatment or about to be treated.

b. Severe arteriosclerosis.

c. Carotid artery disease.

d. Temporal arteritis.

Patients in these categories may be more susceptible to increased intraocular pressure because of the likelihood of involvement of the blood supply to the optic nerve, somewhere between the carotid artery and terminal branches directly to the nerve).[9]

4. *Possible use of Bjerrum sensitivity test.* The sensitivity of an eye to damage from intraocular pressure may be detected by using a test which relates the amount of pressure over the globe necessary to produce a field defect in the Bjerrum area (10 to 20 degrees) to the retinal artery pressure of the eye.[10] In normal subjects this index is close to unity; however, subjects with overt glaucoma develop a field defect at a significantly lower pressure on the globe (high index). It is assumed that the subjects with tonometric glaucoma showing a high index are likely to develop early visual field changes.

Summary

Glaucoma is an intermittent disease characterized at some time by: (1) an elevation of ocular tension, (2) a markedly fluctuating ocular tension, (3) an asymmetry of the intraocular pressure in the two eyes, (4) a low facility of outflow, (5) a high glaucoma index, (6) a susceptibility to water loading, and (7) a susceptibility to topical treatment with certain steroids.

There appears to be a long period of time between the development of the above features and the occurrence of damage to the optic nerve, however, the decision to treat an eye must be based on numerous considerations. Of particular importance is the identification of the individuals who are more likely to develop visual field changes even with mild or moderate elevations of ocular tension.

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The Psychiatrist and the Eye

H. J. Drell, M.D., *Rockford*

The eye, so often referred to as the mirror of the soul, has been heavily charged with religious symbolism. The pre-Renaisance, with its mysterious aspect of the eye, impeded the academic study of the organ. In primitive mythology, the eye frequently was seen in various icons and portraits. They were anatomically displaced (put into other than the usual area) and could be seen in portraits of the wings of angels. The eyes could be reduced in number as in the case of Cyclops or increased as in the 100-eyed Argus of Greek mythology. Historically, the eye has been used as a magic protection (as a talisman). It was the symbol of Divine Providence, as well as "Satanism" wherein the vision was obscured by pathology or darkness from without. Even today, the eye is used by surrealist painters such as Dali and Picasso to portray their feelings or possibly to confess their inner struggles.

When we leave the mystic and earlier ages of man and come to the period of the Renaissance, we recognize again a great contribution in the works of Lenoardo da Vinci and his peer painters. To men of this period, we owe much as these artists contributed a newly awakened interest in exploring the world . . . an interest in the question as to *how we see . . . how we* emotionally *look at things* and in how we use sight as the agent to explore the world.

The Arabs had specialized hospitals for eye diseases as early as the year 100 A.D. Sociological and geographical forces created the progress in efforts at therapy due to the preponderance of blindness due to Egyptian ophthalmy (trachoma, plus other eye diseases caused by perennial sand storms). However, the meticulous study of the eye or other parts of the body could not be ventured into as it *violated* the religious ban on dissection.

I could go on but there are cases which are frequently seen in the psychiatrist's office which during the initial or diagnostic visits give a clue to the problem, or to drugs which are taken by the patient to help him adapt to the internal and external stresses. When I funcioned as a psychiatrist in a military prison during World War 2, I was impressed by the wide pupils seen in prisoners taking benzedrine. Currently, the incidence of narcotics ingestion is on the increase and constricted pupils are more commonly seen.

Psychiatry is the art of listening and observing. How frequently have I seen patients with markedly constricted pupils. Often my question "What have you been taking?" leads to a cancellation of the subsequent appointment. T. Adams stated "The eye is the pulse of the soul; as physicians judge the heart and the pulse, so we the eye." I routinely look into the eye grounds as I have been impressed with the number of cases of increased intracranial pressure which psychiatrists and other men of medicine have missed. If the optic nerve is not greatly visualized, in my opinion, this calls for an ophthalmologic and neurologic consultation. During my

Fellow, American Board of Psychiatry.

Presented at the 124th Annual Meeting of the Illinois State Medical Society, Thursday, May 21, 1964, at the Sherman House, Chicago, Illinois.

twenty years of practice, I have seen more than one case referred to me as emotional, which turned out to be other than functional. The two can exist side by side . . . the organic with an emotional overlay.

Patients who close their eyes when relating a life incident, a fear or a feeling, often are shutting out the person because of their fear of being punished or judged. It has a bit of magic . . . in other words . . . "if I cannot see you, you cannot see me." The incident requiring eye closure on the part of the patient is often one of the clues to the problem he does not want to see. Today, we do not attempt to work with other than open eye reality, in order to create healthy attitudinal changes. THE COUCH HAS BEEN REPLACED BY THE CHAIR. So are ordinary relationships face to face. The patients who will not look at their environment often express fear of the evil eye, being turned to stone, etc.

Exhibitionism is the reverse side of the coin. Those who fear looking or turn red deny their exhibitionistic tendencies within them and create a wall between themselves and others. Blushing (erythrophobia) is a means of saying "I'm sorry. I'm suffering. Please don't make me feel any more uncomfortable. I feel ashamed. I do not want to be seen." Of course, I am speaking in symbolic terms and shall not be able to go into the psychophysiology and enter into the vagal and sympathetic responses.

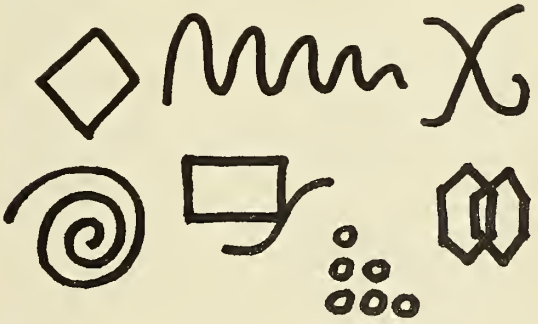
There is a kind of magical aura tied in with the belief that anyone who does not look, cannot be looked at. An extension of this I have observed in certain paranoid patients who came into my office bespectacled with dark glasses (non prescription) as they do not want others to look at them and consequently feel able to look and control the world. I am cautious of an attack if they refuse to remove their glasses.

The conversion or hysterical-blinded person is saying symbolically "I do not want to see." The doctor, however, only hears *"I cannot see."* This is a fear of looking. From the punitive standpoint, it says "because you wish to see something forbidden . . . you shall not see at all." Constriction of the visual field is often seen in conversion cases and is the neurotic statement "I have enough trouble handling what is in front of me. Don't make me face a larger problem (world of experience)."

Briefly, the largest problem in our civilized culture is that we have not learned how to handle our aggresive or sexual inner feelings (comfort in close interpersonal relationships). Neurotics so often distort, somaticize or handle these feelings as though they individually were the first to feel them or think of them.

On the severely psychotic wards, we have seen eye enucleation. Recall Van Gogh and his cutting off his ear? This was his "unhealthy way" of adjusting to his world. He had hoped to cut off the voices.

I recognize the use of the Bender-Gestalt test to rule out pre-senile dementias and other organic problems resulting from the increased longevity of people. If there is pathology in duplicating the following:



There is suggested organic involvement in the *abstract* and *judgmental* areas of the brain. This problem exists also at younger age levels with birth traumas, poisonings, etc. There are also many psychological tests which can be utilized but the important element to the psychiatrist is the therapy. To see is to experience and feel and when understanding evolves, changes in attitudes take place. Even the psychiatrist *must* look at himself.

I completed by residency more than twenty years ago when I was in my late twenties. I have yearly filled out a form for the American Psychiatric Association which asks, amongst other things, what age level I enjoy working with. It is amazing that in my twenties, I felt that people in their forties had lost all their elasticity and were poorer treatment risks. Now I see how wrong I was! Texts and verbal output, however, do not or cannot change one's way of seeing things. It is only after we reach a certain *chronological* age that we FULLY UNDERSTAND.

Emerson wrote (and this is what the psychiatrist watches for) "An eye can threaten like a loaded and leveled pistol, or can insult, like hissing or kicking, or in its alerted mood, can by beams of kindness, make the heart dance with joy . . . some eyes have no more expression than blueberries, while others are as deep as a well which you can fall into."

In closing, I will repeat what Colton stated: "Men are born with TWO eyes, but only ONE tongue, in order that they should see twice as much as they say."

The View Box

LEON LOVE, M.D.
Director, Diagnostic Radiology
Cook County Hospital



Figure 1

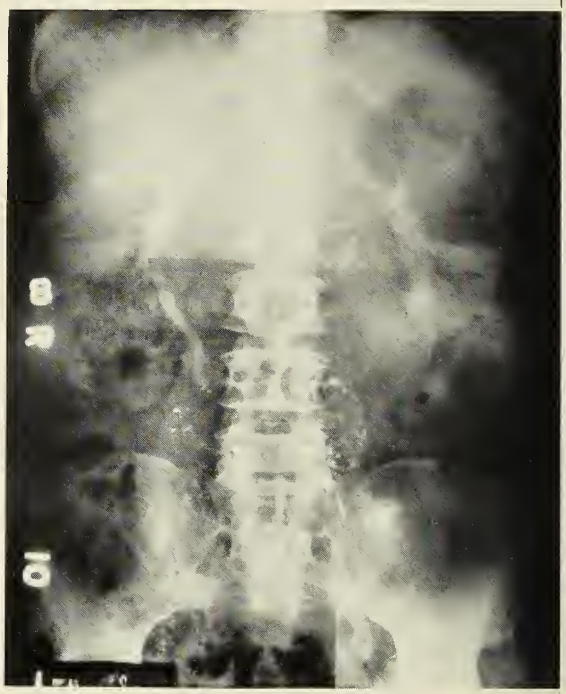


Figure 2

This 48-year-old female entered the hospital because of a low-grade, unexplained fever of 2 months' duration.

Physical examination revealed a chronically ill but well developed patient with no significant physical findings.

Lab. results: 3.6 RBC's, 5500 WBC's with normal differential Urine 1+ albumin, 2-3 RBC's.

An intravenous pyelogram was done.

(Continued on page 433)

Paracervical Block for Labor

Thomas J. Durkin, M.D., *Rock Island*

Medications have been changing over the years for the relief of painful contractions associated with labor. This can only mean that the ideal agent has not yet been found. To date, paracervical block given in labor offers a more ideal relief of the painful contractions. Paracervical block is not something new. It was first reported used by Gilbert and Pribram in Germany in 1927. Until recently it has only been used sporadically. Now, paracervical block is gaining more popularity. This is due to the better agents that are available to the physician and also due to the refinement in technique. There are now articles in the recent literature attesting to the good results of this procedure.

Paracervical block consists of the introduction of the anesthetic agent into the base of the broad ligament on each side through the vagina. The ideal time for the medication to be given is at 3 to 4 cm. of cervical dilatation in the multiparous patient, and 4 to 5 cm. in the primiparous patient who is in active labor. The patient who is to receive the procedure is placed on the delivery room table in the lithotomy position. The perineum and genitalia are prepped with pHisoHex®. Sterile gloves are worn and the materials needed are:

Kobak needle with guide
1% Carbocaine solution (Mepivacaine hydrochloride)
10 cc. Control syringe

The procedure is given first on the right side giving 4 cc. of Carbocaine solution at five o'clock and seven and one-half to eight cc. at three o'clock. This is then repeated on the left side, giving 4 cc. of Carbocaine solution at seven o'clock and 7½ to 8 cc. of solution at nine o'clock. It is very important that the medication be injected outside of the cervix. Using the Kobak needle with guide between the index finger and third finger, one is easily able to inject the medication. The Kobak needle projects 1¼ cm. beyond the guide and this prevents the needle from being injected too deeply into the broad ligament. This can happen when a plain spinal needle is used or with the needle and guide as described by Davis.[1] The Iowa Trumpet needle with guide as advocated by some, does not permit the ease and control when a deep vaginal vault is encountered.

The indications for the procedure are used primarily for a patient in active labor during the acceleration phase, but can be used in premature labor, etc. It has been used and advocated for minor gynecological procedures but would only be justified in places where adequate anesthesia is not available. Three cases will typify the results:

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Case Reports

Case 1. Twenty-one-year old Gravida I Para 0 at term admitted in active labor on 3/16/64 with contractions every five minutes. Cervical dilatation was three to four cms., and station was +1. Paracervical block was given at 10:20 p.m. and BOW ruptured with the De Lee perforator. Then five hundred ccs. of 5% Dextrose in water with seven and one-half minims of Pitocin started intravenously to reduce the contractions to every three minutes. Numorphan one-half cc. (0.75) mgms. and Scopolamine grains 1/150th given at 10:45 p.m. After the paracervical block was given no further contractions were felt by the patient. Patient delivered a viable female infant weighing 7 pounds, 4 ounces through LML episiotomy under general anesthesia at 12:12 AM

Case 2. Twenty-seven year-old Gravida III, Para II at term admitted in active labor on March 7th, 1964 with contractions every six minutes. Cervical dilatation was 4 cms. and the station was 0. Paracervical block was given at 7:40 AM and the BOW ruptured with the De Lee perforator. Then 500 ccs. of 5% Dextrose in water with seven and one-half minims of Pitocin added was started to reduce the contractions to three minutes apart. Numorphan ½ cc. was given IM at 7:45 AM. Using pudendal block, the patient delivered a viable female infant at 8:31 AM through LML episiotomy. No further contractions were felt after the paracervical block was given.

Case 3. Twenty-eight-year old Gravida V, Para IV at twenty-one weeks admitted March 5th, 1964 with ruptured membranes. Cervical dilatation was two to three cms. at 10:10 AM. The patient was very apprehensive and Numorphan ½ cc. was given at 10:10 AM. At 10:22 AM cervical dilatation was 4 cms. Paracervical block anesthesia given, and 500 ccs. of 5% Dextrose in water with seven and one-half minims of Pitocin added was started at 10:47 and an immature male fetus was delivered spontaneously. Comment: The patient felt no more painful contractions, only the pressure from the contractions.

In the past year we have used the paracervical anesthesia in 152 cases. Tabulation as to the results of excellent, etc. could only include my own enthusiasm for the procedure. We have had only one complete failure and this was in a case of erythroblastosis that we induced at 36 weeks. We have had several partial failures. Painful contractions were totally eliminated except in some at the end of the first stage of labor. We agree with the 96.58 excellent and good results obtained by Sandmire and Austin.[2]

We routinely do not use intravenous Pitocin, but when we have a patient in active labor and the contractions are not three minutes apart or closer, then we start intravenous Pitocin. Delivery is dependent upon uterine contractions for cervical dilatation and the contractions are more effective when they are at least three minutes apart. In addition, paracervical block will last approximately one to one and one-half hours.

We have not found it necessary to add epinephrine to the Carbocaine since the procedure can be repeated. Then we give only 7½ to 8 cc. of Carbocaine on each side. We have repeated the procedure when it was felt necessary. Kobak and Sadove reported that added epinephrine will produce fetal brachycardia and produces inhibition of uterine contractions.[3] The only definite contraindications to the procedure are infection and sensitivity to the drug.

Complications

Maternal: Vaginal or broad ligament hematoma, infection, intravenous administration, too rapid absorption and sensitivity have not occurred in our cases. We have had an occasional patient complain of numbness or tingling in one or the other lower extremities which rapidly disappeared after delivery; nor have we had any lumbosacral plexus neurities. When we first started to do paracervical blocks, we noticed some cases of urinary retention. After becoming more adept in giving the procedure we have not had this complication.

Fetal: Fetal brachycardia does occur even though epinephrine is not added to the Carbocaine. It is estimated that it occurs in one of fifteen to twenty of the cases. It is advocated that inhalation of oxygen by the mother will speed the elimination of the brachycardia. In most cases the fetal brachycardia will last only a few minutes.

Labor and delivery are two separate entities. Paracervical block anesthesia for labor has no bearing on the type of anesthesia used for delivery. A patient that has a comfortable first stage of labor will not necessarily have an easy delivery. This is particularly true in primiparous patients. We use general anesthesia, saddle blocks and pudendal block anesthesia. We fit the anesthesia to the patient although we are more liberal with a primiparous patient since first labor takes longer and is more difficult.

It is noticeable that paracervical block along

with Pitocin when necessary shortens labor. This is strikingly noticeable in the primapara patients. Whether the paracervical block softens and relaxes the cervix, we do not know; but in certain patients, one gets the impressions that this is happening.

Summary

1. To date, paracervical block has been administered to 152 patients in labor with no maternal or fetal complications.

2. Because of its easy administration, safety to both mother and fetus and its effectiveness in relieving the painful contractions of labor, this procedure is highly recommended for vaginal delivery.

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The View Box

—diagnosis and discussion *(Continued from page 430)*

Diagnosis: Lymphosarcoma



Figure 3

The IVP demonstrated compression and lateral rotation of both kidneys away from the midline. The most likely consideration is a retroperitoneal mass, probably lymph gland enlargement.

Technique: An injection of Indigo Carmen (1 cc. + 1 cc. of 2% Procaine) is made in the webbing of the toes of both feet. After 10 minutes the lymphatic channels are visualized on the skin surface. A single channel is dissected and a 30 gauge needle is inserted into the lymphatic channel. (A polyethelene catheter is now being used as an easier method). An injection of 10 cc. Ethiodol is injected slowly in each foot at the rate of 1 cc. every 3 to 4 minutes. After complete injection, films are taken of the pelvis, abdomen and chest.

Early films demonstrate lymph channel and lymph node filling. A film 24 hours later demonstrates nodes only. The appearance of soap bubble enlarged nodes is characteristic of lymphoma (Films 2 and 3).

The procedure is somewhat disappointing for metastatic disease, particularly if unsuspected, but will usually demonstrate metastases unless the nodes are completely replaced by tumor. It has value in radiation therapy and surgery for location of the involved nodes. It is also used in demonstrating lymph obstruction and in cases of chyluria.

Complications are: 1) pulmonary fat emboli, usually not too serious, and 2) local skin drainage from untied lymphatic channels.

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Pudendal Block Anesthesia

W. R. Freeman, M.D., *Champaign*

Although most obstetricians are fortunate enough to have around-the-clock anesthesia service with qualified personnel at their disposal, a considerable number of obstetrical anesthetic procedures performed throughout the state are administrated by the physician alone or with the aid of untrained personnel. The purpose of this paper is to discuss the one simple and effective anesthetic that is indicated for vaginal deliveries—pudendal block. We are convinced that pudendal block is not utilized to the extent that it deserves.

In a 1955 report on obstetrical anesthesia in Illinois, we urged the use of pudendal block for more vaginal deliveries. At that time we reported 18 maternal deaths in the five year period 1949-1954. This included downstate and Cook County outside of Chicago. Fourteen of these deaths were due to inhalation anesthesia, with 10 of the 14 deaths being related to aspiration of vomitus. One death resulted from massive spinal caudal anesthesia, and one was associated with spinal anesthesia. This latter patient had also received ether. One death was attributed to pentothal sodium. Significantly, ten of the deaths cited were associated with vaginal delivery.

Unfortunately, the statistics for Chicago are not available in Springfield. The only information on Chicago we were able to obtain for our original study related to four anesthetic deaths during the 1949-51 period, and six in 1954. No further details were made available.

The number of infants lost or damaged due to choice of anesthesia could not be determined, either downstate or in Chicago.

During the 1958-1962 period 274 maternal deaths occurred in downstate Illinois and in Cook County—exclusive of the city of Chicago. Of these, 15 (5.5 per cent) were attributed to anesthesia. We have no information on Chicago proper.

Ten were attributed to general and 5 to conduction anesthesia. Again, no assessment of fetal damage could be made. It is obvious that room for improvement in obstetrical anesthesia still exists.

From June 1, 1962 to June first this year, we used pudendal as outlined below in 98 per cent of our vaginal deliveries. Extensive repairs including cervical lacerations were accomplished without additional procedures. This included manual and forceps rotations, forceps deliveries and breech deliveries with application of Piper forceps.

Prerequisites for satisfactory pudenal anesthesia are:

1. Proper patient education and instruction.
2. Proper premedication during the first stage of labor.

3. Familiarity with block technique.

Since 1948 we have conducted prenatal classes for expectant parents showing a film on prenatal care and normal delivery. We have attempetd to impart to the couple some rudimentary information regarding the physiology of labor and the problems, advantages, and disadvantages of the different techniques of pain relief. Simple relaxation exercises are outlined and general questions are answered by the obstetrician.

The classes require 3 sessions at 8 week intervals and have been more satisfactory in our hands and less time consuming than in giving individual instruction. We are convinced that there are less problems of anxiety and better relaxation during labor with those who attend the classes than those who fail to do so.

For the past few months we have been referring the patients to hospital parent classes but because of the general nature of these classes they are less valuable in this area.

Analgesia During Labor

We insist that patients receive meperidine 75 mg. and promethazine 25 mg. preferably at least one hour before delivery, although the infant is not depressed if delivery is sooner. If delivery is imminent and no premedication has been given, meperedine 50 mg. intravenously is administered.

The meperidine and promethazine are ordered when justified by discomfort at approximately 4 cm. dilation. This may be repeated only on direct order. We administer the premedication even to patients who are not feeling marked discomfort as the delivery and repair with pudendal is much more satisfactory than with no premedication.

In some instances of tension and unsatisfactory uterine contractions, particularly in early labor, we feel that Vistaril 100 mg. IM frequently provides relaxation and facilitates cervical dilation.

Constant support and reassurance by the physician and nurses are extremely important in managing the tense patient. We feel that the understanding, experienced nurse makes the difference in patient response in a fair percentage of cases.

Technique of Pudenal Block

We still believe that the transperineal technique as originally described by Klink (Am. J. Ob-Gyn 1:37:46-1953) is preferable to the transvaginal techniques as described by Wilds, Kobak and others, except in simpler deliveries where little anesthesia is required.

This may be explained by a brief review of the sensory innervation of the perivabinal area:

I *Pudendal nerve* divides into 3 branches:
- A—Perineal nerve—supplying filaments to the external anal sphincter, perineal skin, levator muscle, superficial and deep perineal muscles, ischiocavernosus muscles, membranous urethal, anal sphincter, and the labia majora.
- B—*Inferior hemorrhoidal branch*—arising higher and piercing Alcock's canal to innervate the external sphincter and perineal skin.
- C—Dorsal nerve of clitoris.

II *Perineal branches of posterior femoral cutaneous nerve* to the lateral perineum and labia majora.

III *Less important branches to the pubic* area from the Ilio-inguinal and genitofemoral nerves.

Although admittedly inexperienced with the Kobak needle and similar devices there are inherent disadvantages to the transvaginal technique. It is probably simpler to block the pudendal nerve at the point of the spine transvaginally but a low fetal head may increase the difficulty.*With this technique blocking of the important inferior hemorrhoidal branches of the pudendal as well as the perineal branches of the posterior femoral cutaneous nerve which lie deeper is more difficult and uncertain.*

For these reasons we would like to briefly review the Klink technique for pudendal block.

Xylocaine 1 per cent seems as safe and adequate as any agent as it diffuses well even when placement it's not too accurate. A 10 cc. syringe and a 4 inch 20 gauge spinal will suffice in most cases. If the patient is obese or large, a 5 inch needle is preferred.

Guided by the fingers vaginally, the needle is inserted through the perineum between the ischial tuberosity and the anus, somewhat nearer the anus, advancing through the ischiorectal

fossa toward the posterior surface of the ischial spine.

As the needle approaches the spine, the guiding finger pushes it posterior to the tip of the spine. In the pudendal canal the needle meets less resistance and can be moved easily back and forth.

With accurate placement the needle will penetrate the adjacent pudendal vessels a fair percentage of the time. Aspiration before injection is essential as intravenous injection of the agent may create alarming symptoms, and constitutes the most serious possible complication of this procedure.

Three or four cc. injected beneath the inferior tip of the spine, the needle is then advanced to the superior tip and another 3 or 4 cc. injected. It is then advanced well beyond the spine and 4-5 cc. injected to block the *hemmorrhoidal branch* and the *posterior femoral cutaneous nerve*. This makes the difference in our opinion. Anesthesia is adequate in 5-10 minutes and persists for 30 minutes or longer. It is well to infiltrate the margins of the episiotomy before suturing if the interval is longer than 30 minutes.

Occasionally there seems to be some slowing of uterine contractions temporarily, particularly in multipara. This is not a frequent problem but Pitocin drip has been required on occasion.

For the patient with a lower pain threshold, or where delivery is difficult, we may use self-administered trichlorethylene. It is not permitted in sufficient amount to make the patient incoherent or uncooperative. It should not be administered by a nurse as deepening of trichlorethylene anesthesia may be associated with bradycardia or cardiac arrythymia.

Trilene given over longer intervals has a depressing effect on fetal respiration. One must remember that trilene should not be followed by closed system general where soda lime is in the system as the combination is toxic.

Summary

Pudendal block anesthesia for routine vaginal delivery has these advantages:

1. The technique is simple.
2. It is safe for mother and baby. Infant resuscitation is rarely required.
3. There is less operative obstetrics. With full muscle control and mental awareness the patients cooperate well.
4. There is less tendency for excessive use of force. Gentleness is a necessity if this simple anesthesia is to be effective, and in those trying situations where excessive force might be unintentionally utilized one is soon reminded by the patient!
5. There is less blood loss. Certainly less than with general anesthesia.
6. Absence of nausea and vomiting is noted. These symptoms are rare.
7. Decreased patient expense is an increasingly important item.
8. The patient is returned to her room and husband feeling well physically and mentally with no post anesthetic recovery period.

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Marital "Ups and Downs"

During 1963, the total number of marriages recorded in the state was 93,420, Dr. Franklin D. Yoder, director of the Illinois Department of Public Health, announced last month.

For 1962, the total was 87,645, down slightly from the 88,692 recorded in 1961.

Divorces last year numbered 20,519, as compared to 18,634 during 1962, and 25,712 for 1961. A total of 246 annulments took place during 1963, compared to 186 during 1962, and 261 during 1961.

June and December tied in popularity for most favored months for marriages, while January had the least recorded marriages. June had the highest number of annulments, and October the highest recorded number of divorces.

The Family Concept of Infant and Child Care

Arthur W. Fleming, M.D., *Chicago*

When parents come to the office with a newborn infant some of the things discussed are: The fallacy of extreme permissiveness; extreme rigidity, or too great flexibility of a schedule, and the true meaning of such words as hunger and crying.

Hunger

Hunger can be defined as want—any strong or eager desire; also as a need, such as a need for food. The latter is the best pediatric usage and the one applied in taking care of children. An index of sufficient food then must be general good health and normal weight gain. A baby attaining such consequently cannot be described as hungry.

With the parents, the physician must discuss the cause and handling of crying. Crying chiefly occurs at three times in relation to eating. The first is right after eating, and is treated by belching the infant.

Crying one to three hours after eating is caused by gas formation as food digests and is treated in the following way. The physician first explains to the parents the cause, as above; he then explains that such a baby may kick and chew on its fingers. He asks that the baby not be overhandled, and explains to the parents how to survive the strain of the crying infant without harming either themselves or the infant. He may consider using an antispasmodic or changing to a more digestible feeding. He warns the parents that such a baby can be trained to cry excessively and may be extra irritable if it is overhandled. Crying about three hours after a feeding is caused by the normal emptying of the stomach and such crying may occur until the baby gets used to it. The stomach needs a rest period just like any other part of the body and therefore the baby's crying is not necessarily a cause for immediate concern. After all, it is not the purpose of life to constantly keep one's stomach full.

Schedule

The schedule, its meaning, application and effect must also be discussed. Schedule is a word with a bad connotation when relating to infant feeding. Everyone enjoys having his train arrive on schedule or his plane arrive on schedule. When there is a variability in this, which might be somewhat comparable to a self-demand schedule, no one is particularly happy about it. Most things in this world operate on a schedule.

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Based on talk on "Good Pediatric Care in Infants, Children and Adolescents" given by Dr. Fleming at a meeting of Coles-Cumberland County Medical Society and Illinois State Medical Society, Mattoon, Illinois on April 11, 1963.

Most homes operate on a type of schedule and most infants do well on a schedule. A schedule, as the physician uses it, may be a four-hour interval; that is, feedings are approximately four hours apart, usually within twenty minutes of a designated time. This flexibility works out well for the household and for the infant and yet is not too flexible. A designated time should be that time which best fits the activities and life of the family. It should be in proper relation to family functions. It must be remembered that the baby is being brought up to live in a family situation and eventually in a world to which it must make some adjustment. To such a rhythm most babies adjust very well and favorably. For an exceptional or sick infant, some variation is necessary, as for any family member who needs special attention. Regularity in handling the normal infant also tends to make him more content and less irritable than infants that are handled too frequently and irregularly.

Feeding

This brings the discussion to the food on which the baby is maintained. Milk is the most important food in the first year. Breast feeding is preferable; if this is not possible, some type of formula feeding is used that is acceptable to the infant and easy to handle for the mother. In the allergic baby, consideration must be given to special milks such as some of the soy milks; these are next best to breast milk for the allergic baby.

Solid foods have had considerable variety in their starting time in the last few years but there is no proof that any good purpose is achieved by their early introduction. There is reason to believe that starting solid foods too early may at times be a factor in causing a mother to lose her milk early. It may also be a factor in developing an allergic disturbance. The American Academy of Pediatrics Committee on Nutrition states that it has been unable to find any benefit from early feeding of solid food.*

For a suggested average feeding program, a starting time of about 3 months might be assumed which is between the very early and the very late. It is to be emphasized that a starting time of solids may be later than 3 months.

Using a sample schedule of 6 a.m., 10 a.m., 2 p.m., 6 p.m., 10 p.m. and 2 a.m. the first cereal food would be started at the 10 a.m. feeding. This may be a single serving of oatmeal, rice or barley as a cereal food. A small amount of milk should be mixed with it and the balance of the milk given out of the bottle. The next month the vegetable feeding could be started at the 2 p.m. feeding. Usually three vegetables such as carrots, beets and spinach are given; this gives ample variety for an infant during the first year. Anything new is always started with tastes. Between the 3rd and 6th month, egg yolk or meat or iron itself could be started as a source of iron. At the sixth month a cereal feeding could be added at the 6 p.m. feeding.

If the baby is receiving egg yolk and a cereal, the egg white may be added gradually. At the seventh month, fruit such as applesauce, apricots and prunes may be added after the 6 p.m. cereal feeding; again, these give ample variety during the first year. "Cereal substitutes" such as bananas, baked potatoes and macaroni may be given occasionally in place of the evening cereal. At the eighth month, cottage or cream cheese may be started at the 2 p.m. feeding. At the ninth month, pudding may be started after the 2 p.m. feeding. Although one can use most puddings, it is wise to avoid chocolate.

Important facts on feeding during the first year are: 1. The digestibility of the milk feeding may be increased by dilution, heat treatment or acidification. Both dilution and heat treatment are commonly used; acidification is not used as much as it was formerly. 2. The chopped and large particle foods may be introduced between the sixth and twelfth month. If the baby accepts them reluctantly, a mixture of large and small particle food may be used and gradually increased to the large particle food. 3. The cup may be started between the fifth and the tenth month and is usually started at one feeding in the middle of the day at which time all milk taken, comes out of the cup. If the baby is doing fairly well on the cup after about a week, a second cup is added and by the end of two weeks he is completely on the cup feeding. As the baby practices drinking from a cup, he becomes more adept and as a result gets more milk from the cup. Any temporary diminution of milk intake

*Collected Reprints of the Committee on Nutrition, 1956 to 1962, American Academy of Pediatrics, pp. 14-21.

is of no particular consequence. 4. Changing from six meals to three is usually started by one month of age. A six hour night schedule can be temporarily assumed by giving the 10 p.m. feeding at 11 p.m. and dropping the 2 a.m. feeding. The 6 a.m. feeding might be given anytime after 5 a.m. Withing a week to ten days this feeding can be moved ahead to 6 a.m. and the late feeding gradually moved back to 10 p.m. The baby is usually ready to go to four feedings between the 4th and 8th months. This is done by dropping the 10 p.m. feeding. The change to three feedings can usually be made between the sixth and the twelfth month. In making this change the 6 a.m. feeding is dropped; the 10 a.m. feeding shifted to 7-8 a.m.; the 2 p.m. feeding shifted to 12-1 p.m.; and the 6 p.m. feeding to 5-6 p.m. This gives an approximately 5 hour feeding interval which corresponds to that used in most families. 5. During the first twelve months a limited variety of food is desirable. Cereals, fruits and vegetables, usually three or four of each is quite adequate. After this the variety is gradually increased. One should be cautious about foods difficult to digest such as cabbage and corn, spicy foods and fried foods.

Most young children do best with their main meal at noon. As the second year of feeding begins, it is found that the 40-70 calories per pound from the first year are reduced to 35-45 calories per pound in the second year. The average yearly weight gain in the first year is 12-16 pounds and in the second year 4-6 pounds. This poses a different food intake and if parents are not made aware of this it may cause considerable disturbance to them.

Variety

Food needs in the second year are relatively small. Variety is more important than quantity. Variety can be adjusted by reducing the quantity of some foods rather than forcing larger quantities of others. It must be remembered that hunger is the best tonic. Excessive comment and threatening of a child is not a good way to get him to eat. It may aggravate him as well as upset the whole family, and may actually make him sick. Small portions are desirable and the amounts may be based on what he has eaten in the past. A short but adequate time should be allotted for meals. A very good environment is created if there is a family policy that no comments of dislike of food be made by anyone. An attempt should be made to teach the child to form the habit of always taking a taste of everything.

Eating at Table

What about the criterion as to when a child should eat at the table with adults? This is relatively simple: When he is able to feed himself so that the mother is free to feed herself and enjoy a good meal which she very much needs. Many women eat poorly at breakfast and lunch. A woman looks forward to, is entitled to and is often very much in need of at least that one good evening meal free of distratcion to be enjoyed with her husband. It is possible that this may help a family over some of the rough spots that occur in every marriage.

Between-meal snacks are usually undesirable. If used, they should be small in amount and as far from a meal as possible.

If a child is taken out to a restaurant, a time should be picked when it is not busy so that quick service may be given and the child will not have to be restrained unduly in unfamiliar surroundings.

Growth and Development

It is also of some interest to the parents to know some general facts on growth and development. In the first three months there is eye coordination; in the third to the sixth month, hand-eye coordination with the infant able to hold a rattle and to hold the bottle. In the sixth to the ninth month there is back development as the child becomes able to sit. In the ninth to twelfth month there is leg development, standing and the beginning of speech.

In the next two years the child develops better ability at standing, walking and speech. He becomes very interested in investigating his surroundings so that the parents must be constantly on the alert; allowing him ample opportunity, but seeing to it that things are done safely. In this way the child is helped to grow up in his environment and is protected from permanent harm. Elements of training that will be of permanent value are incorporated right with the child's feeding and rearing of the first two years and thus also become a part of him.



PART I
OF A
TWO PART
SERIES

a review by

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DNA Molecule photo courtesy of Abbott Laboratories, North Chica

Introduction

There has been a remarkable advance in the understanding of problems of genetic inheritance in the last 20 years. Even more remarkable is the progress in knowledge of the mechanism of expression of genetic information in the living organism. Some of the information obtained has helped us to understand the nature of some diseases with an obvious inherited nature. The result thereof has been better treatment of such diseases. The natural corollary therefrom is that the modern physician has to keep his eyes open to future developments in order to be able to apply the newly acquired knowledge for the benefit of his patient. The gastroenterologist is no exception. It was therefore thought useful to collect the readily available information about genetics of gastrointestinal disease, with the hope that it will focus attention on this area and thereby stimulate work in this field.

Genetics, in the past, was remote from medicine for several reasons:

1. Insufficient information about familial occurence of disease.
2. Difficulties in diagnosis of heterozygote states.
3. Impossibility to obtain directed matings or large enough progeny in man.

Genetic studies have advanced therefore through work with viruses, bacteria, fungi, plants and small animals. The method used was experimental breeding. Important results have been obtained as these organisms had a short life cycle, large numbers of offspring, and were convenient and economic. From this work the basic laws of genetics resulted, including Mendel's laws, the cornerstone of all genetic science. This work proclaimed the persistence of genetic units, the purity of gametes and established the laws of segregation.

Statistics have been a powerful tool, helping to interpret the experimental results obtained. Ratios and laws of probability have been of major help in this context. As an example: from the rations obtained in interbreeding of members of F_1 generation, we are in a position to find out how many factors are contributing to the inheritance of a particular characteristic.

The work with man had to be by necessity slower and limited. Pedigrees were used but, unless critically evaluated, they may be biased. Studies of twins contributed knowledge of the influence of the environment on individuals. Lately, considerable progress has been achieved through cytogenetics and biochemistry.

For the understanding of genetics, it is important to become familiar with the process of mitosis, so fundamental in sexual mating. Even more important is the process of meiosis, which is a reduction-division of the diploid cell chromatin. A reduction of the number of germ-cell chromosomes to the haploid value is obtained. During meiosis close pairing of chromosomes occurs. As a result of breakage and rejoining there is crossing over with the net result—recombination.

Genetics will assume, in the future, a more important role in medical education and in medical practice. It will be useful to describe more fully information of a general nature.

The genetic code is contained in nuclear DNA which is the building material of genes in the chromosomes. DNA has a "specific" arrangement of purine and pyrimidine bases within the double stranded helix of the Crick and Watson hypothesis. Nuclear enzymes synthesize RNA; which process requires DNA and the base sequence in this RNA molecule is patterned on that of DNA. This "messenger-RNA" is released into the cytoplasm and it conveys the code message to the ribosomes of the endoplasmic reticulum, where protein synthesis occurs. This is the pathway in which a gene controls the sequence

of aminoacids of proteins. The newly acquired notion of the genetic code presupposes that it consists of triplets of nucleotides; this code is non-overlapping and it contains portions defined as "nonsense DNA." These portions are redundant, and do not serve the purpose of transmitting genetic information.

All cells other than germ cells are diploid, and the genetic information is present on two corresponding genes of two corresponding chromosomes. In the homozygotes these corresponding genes (alleles) are identical. In the heterozygote alleles differ. This may be due to a mutation, induced or spontaneously occurring, in one of the parents. As a result of this difference, there will be an alteration in the aminoacid sequence. A good example of such an occurrence is the particular type of hemoglobin found in sickle-cell anemia and called hemoglobin S, the result of a mutation expressed by the presence of valine instead of glutamic acid in the B chain of the globin molecule of hemoglobin. Hemoglobin C has lysine instead. When a gene is responsible for the production of an enzyme, the normal homozygote has a full complement of genetic material and therefore a full measure of enzyme. In heterozygotes in which one allele codes an abnormal protein, the amount of enzyme produced under the direction of a certain gene may be only 50% of the normal enzymic complement; it is still sufficient in most of the cases to carry on enzymatic activity for biochemical reactions. The abnormal homozygote will not have any enzyme at all. Example: phenylpyruvic oligophrenia corresponds to a homozygous state with no enzyme present to convert phenylalanine to tyrosine. Mental retardation results, with decreased pigmentation and neurologic symptoms. The heterozygote is clinically normal. If a load of phenylalanine is given, the amount of enzyme present becomes insufficient and phenylalanine increases in the blood. Similar tests are valuable for the detection of other heterozygotes, e.g., galactosemia.

The terms dominance and recessiveness may become obsolete if conditions arise when, due to environmental factors, a latent condition becomes manifest, e.g.: excessive use of carbohydrates in latent diabetes, a load of phenylalanine in pheylketonuric heterozygotes or a lactose load in heterozygotes for galactosemia.

In homozygous states complete block of a biochemical reaction may occur and survival depends on some compensatory mechanisms or provisions of the necessary and blocked end-product from the outside. A classic example of a homozygous state is the blocking of ascorbic acid formation from glucose in humans and guinea pigs. The full implication of this block becomes evident where there is no outside supply of vitamin C (scurvey). Sometimes alternate pathways are available as in galactose metabolism to compensate such defects.

There are several patterns of inheritance:

1. *Autosomal dominant inheritance* produces a given effect in the presence of a single dose of genetic material. There are sometimes in this type of inheritance, differences in the phenotypic expression of the gene due to, as yet poorly understood, clinical variability, incomplete manifestation, or to delayed age of onset. The term penetrance refers to the percentage of persons who have signs and symptoms among those who carry the dominant gene.

2. *Autosomal recessive inheritance* requires a double dose of the mutant gene for its phenotypic expression. It is commonly seen in children; there is no apparent disease in the parents, who both are heterozygous carriers. Investigation will reveal consanguinity of the parents.

3. *Sex linked inheritance;* may be dominant and both sexes affected, or recessive and only females affected. If mothers are carriers, half of the male sibs will be affected and these may transmit the disease to their daughters.

4. *Polygenic inheritance* is multi-factorial and is characterized by continuously graded distributions.

Diseases have an etiologic spectrum at one end which diseases stand of purely genetic causation (as hemophilia, achondroplasia and congenital errors of metabolism); at the other end—diseases of a purely environmental mechanism (as fractures and burns). Most of the diseases lie in between; i.e., both genetic and environmental factors are mingled. An example of the latter is glucose-6-phosphate dehygrogenase deficiency; various drugs, foods or exotic substances may cause bouts of hemolysis with various degrees of morbidity in patients with this enzyme deficiency. Genetic factors interact

with poorly defined environmental factors to cause atherosclerosis, hypertension, allergy and a host of other human diseases. Genetic factors may also be of importance in infectious diseases, and it is well accepted that the sickling gene, thalassemia gene and the glucose-6-phosphate dehydrogenase gene are of importance in resisting malaria.

The knowledge of the hereditary character of certain diseases is of practical importance. Galactosemia and phenylketonuria are treatable, and the complications of diabetes and pernicious anemia are preventable.

The genetic material is present in humans in 44 autosomes and 2 sex chromosomes. Lack of an autosome is probably lethal since it has never been observed. An extra autosome has been observed in mongolism. Lack of a sex chromosome characterizes Turner's syndrome (X0) and an extra sex chromosome has been observed in the Klinefelter syndrome (XXY).

Genes are units of inheritance; they are submicroscopic and are located at various points along the chromosomes. Specifically, a gene is the sequence of nucleotides necessary for the production of a specific protein chain. The story of investigations recently performed to unravel the mystery of how transfer-RNA furnishes aminoacids to the messenger-RNA assembly line and the steps taken to break the nucleic acid code is one of the most fascinating parts of modern science.

Genes which occupy the same site on corresponding chromosomes are called alleles. Each person can have only 2 alleles for one chromosomal site or locus, but in a population there is a possibility of many alleles for a given locus. A good example are the many alleles of the Rh factor present in the population.

Mutations do occur in humans as evidenced by appearance of disease without previous occurrence in the family history of the patient. The mutation rate is easily estimated if a certain trait is known to be determined by a single dominant gene and if every carrier of the gene has a phenotypic expression. Mutation rates of recessive traits are more difficult to detect. The why and how of natural mutations are poorly understood. The best known experimental mutagens are ultraviolet and ionizing radiations, mustard gas, and alkylating agents.

Genetics of Diseases of the Stomach and Duodenum

1. Gastric carcinoma

a) *Familial occurrence:* The familial gastric cancer has been studied in the past by many observers. Paulsen[1] reported a family in which the father, the mother and 6 children died of gastric cancer, in another family the mother and five children succumbed to the disease. The classical example of a family study is the "Warthin Family" which was last reported by Hauser and Weller.[2] Four generations were followed. Cancer occurred in 41 persons. Twenty-six of 41 occurred in the gastrointestinal tract. Videbaeck and Mosbech[3] found the frequency of gastric carcinoma 4 times higher in relatives of gastric cancer patients than in a control series. The frequency of cancer at other sites did not differ substantially in both groups. The authors concluded that the predisposition to gastric cancer is inherited and is not associated with a general predisposition to cancer. Woolf[4] selected 222 gastric cancer propositi from the state of Utah. Of 1639 close relatives, 44 died of gastric cancer while 25 were expected after due attention had been given to age and sex. This result was found statistically significant. For other types of cancer no significant difference existed between the observed and expected gastric cancer deaths of 540 spouses of the above group of relatives.

b) *Association with blood-group A:* Aird[5] demonstrated an excess of group A in patients with carcinoma of the stomach when compared with a random group of patients without this disease. It seemed as if blood group A antigen offered a slight susceptibility to and, antigen O a slight degree of protection from gastric cancer.

c) *As complication of pernicious anemia:* Kaplan and Rigler[6] examined the records of 23,231 autopsies. In 293 of them there was the diagnosis of pernicious anemia. Thirty-six of 293 had carcinoma of the stomach; a frequency of 12.3% or 3 times the frequency found in the remaining autopsy material. Olson and Heck[7] found 6 times more gastric cancers and 5 times more gastric polyps when cases of pre-hepatic treatment of pernicious anemia were compared with cases after the advent of liver therapy. Prolongation of life has been considered responsible for the increased frequency of polyps and

gastric cancer. Mosbech and Vicebaeck[8] also found an excessive mortality from gastric cancer in 301 patients who received treatment for pernicious anemia. Based on such evidence, the idea came naturally[9] to investigate pernicious anemia patients for early detection of gastric cancer and gastric polyps. Five of 25 pernicious anemia patients examined had polyps in the gastric antrum. One of the five had at operation an unsuspected carcinoma of the stomach. The genetics of pernicious anemia are quite obscure; the disease had been significantly more frequent in patients with blood group A.[10]

2. Peptic Ulcer

a) *Associated with blood group O:* Aird et al.[11] found an excessive frequency of blood group O in patients suffering from peptic ulcer. Brown et al.[12] confirmed this observation in duodenal ulcer patients. An even greater excess of blood group O was found in the stomal ulcer group. No correlation has been observed between the gastric output of hydrochloric acid and the distribution of ABO groups. Clark et al.[13] confirmed the association of duodenal ulcer with a higher frequency of group O, but a study of the families of these patients showed that individuals with group O are not significantly more likely to develop a duodenal ulcer than are their siblings of any other ABO group.

These authors formulated an interesting hypothesis that, perhaps, not the patients' blood group O is important, but the mothers' O. Blood group substances may be found in the secretions of the gastrointestinal tract in 78% of individuals and this "secretor trait" is an inherited character, dominant in successive generations. When "secretor tests" were carried out with the saliva of patients with duodenal ulcer, a higher proportion of non-secretors was found than in controls. When the families were studied, there was a significant association between duodenal ulceration and non-secretion with siblings. Not only substances A, B, H, of the ABO system are secreted in body fluids, but also Le^a and Le^b of the Lewis system.[14] In a recent report by Clarke et al.[15] the greater liability of the blood group O and non-secretor state to ulcer formation, has been again confirmed. The "risk" was 2.49 compared with 1.0 of the A, B, & AB secretor groups together. The conclusion of the authors was that an immunological factor plays a role in the pathogenesis of duodenal ulcer and the association of this disease with group O and the non-secretor state is a manifestation of such a factor.

b) *Associated with multiple endocrine adenomatosis:* The problem is really not of a chronic peptic ulcer but of recurrent acute ulcerations of the stomach, duodenum, upper jejunum or of the anastomotic site after gastroenterostomy. This syndrome may be associated with various adenomas of glandular tissues of the so-called internal secretion. The most frequent association is with a non-insulin producing (non B-cell) islet cell adenoma. Pender[16] described a case of a benign non-insulin producing adenoma of the pancreas, while the patient's daughter had an operation for an insulin producing islet cell adenoma.

3. Congenital Pyloric Stenosis

There are several facts about congenital pyloric stenosis which point to a peculiar hereditary nature of the disease. It occurs in boys with a five fold higher frequency than in girls; there are concentrations of cases in certain families. When boys are affected, the disease is to be observed only in the mother's siblings. Children of affected women are more frequently affected than children of affected men. These observations point to a sex linked genetic factor which may be involved in this disease. Knox[17] analyzed the likelihood of this hypothesis in the light of calculations based on frequencies in different generations and found no agreement. Congenital pyloric stenosis should therefore be placed in the category of diseases with "curious ancestor patterns."

4. Familial duodenal adenocarcinoma

Ungar[18] described 3 siblings who developed an adenocarcinoma of the duodenum at the ages of 19, 16, and 18 respectively. These patients had multiple polyps of the duodenum and a few discrete polyps in the colon.

Tylosis Associated with Esophageal Cancer

Tylosis is a dyskeratosis consisting of thickening of the skin of palms and soles; it is associated with hyperhidrosis and seasonal shedding of flakes of the dyskeratotic epidermis. This skin abnoramlity is due to a single autosomal gene, heterozygous, and with high penetrance. Howel-Evans et al.[19] described two families with tylosis in which 18 members of the 2 families had carci-

noma of the esophagus. This association may be due to a mutation of the normal tylotic gene. In the cases examined there was no evidence of hyperkeratosis in areas adjacent to those where carcinoma developed. It is well known that the "ordinary" carcinoma of the esophagus has a five fold higher frequency in men than in women. A familial history is exceptional.[20] In a thorough investigation[21] of relatives of 101 probands with esophageal carcinoma no significant difference was found in frequency of this cancer among them, and the relatives of a large control group. The conclusion was that esophageal cancer is due essentially to exogenous factors. The patients reported by Howel-Evans et al.[19] are therefore of high interest.

Epiphrenic Diverticula

The esophagus as other portions of the gastrointestinal tract may harbor a variety of diverticulae. Those of purely congenital nature contain all elements of the esophageal wall while others of the acquired type are composed of mucosa only. The epiphrenic diverticula are quite rare. Only 3 cases have been found of 20,000 X-ray examinations of the esophagus. An approximate estimate of their frequency; 3% of other esophageal diverticula. This type of diverticulum may be associated with cardiospasm since Vinson found 8 cases of cardiospasm among 40 cases of epiphrenic diverticula. Therefore, the finding of a family[22] with father, son, and daughter affected seems significant. All 3 had multiple epiphrenal diverticula which emptied their barium content with contractile motion.

Familial Multiple Polyposis of the Colon

This is a disease of adolescence and early adulthood, characterized by the presence of many adenomas throughout the colon. Its heredito-familiar nature has been first observed by Cripps in 1881. Its frequency is 1 of 8300 births, therefore its gene frequency is 1:1600. One of the genes is a mutant and is transmitted as a Mendelian dominant; therefore 50% of succeeding generations are affected. Forty percent of patients come to medical attention because of an invading lesion. The most frequent symptoms are bleeding, diarrhea, abdominal cramps and anemia. Dukes[23] studied 41 families with 156 cases, with a total of 114 cases of carcinoma of the colon. Smith and Jackman[24] studied 96 cases; 50 men and 46 women, whose average age was 33 years; thirty of them developed frank carcinoma. The reported cases in the literature are estimated at 300. Coller and Flotte[25] reported 40 cases treated with either total or subtotal colectomy. Ten of this group died of carcinoma of the colon.

Veale[26] presented evidence suggesting linkage between familial polyposis and MN blood group system locus; both genes would be located on the same pair of chromosomes. This may be of practical importance in enabling to identify high risk individuals, if confirmed.

Occasional Discrete Polyps of Colon and Rectum

Wolf et al.[27] described a kindred with members who had few and scattered polyps. The type of inheritance was that of an autosomal dominant. When 55 of 96 individuals of the third generation were examined proctoscopically, twenty-five had polyps (45.4%). The controls were the spouses of the third generation. Several members have died of carcinoma of the colon, but the age at the time of death was in conformity to that of the general population. The disease was inherited from a progenitor who was homozygous for the dominant factor.

Part 2—the conclusion of this article will appear in the November issue. The complete list of references will be published in Part 2.

A Comprehensive Medical Approach to the Person with Epilepsy

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The problem of epilepsy needs to be seen as one dealing with persons who suffer from seizures. It is not a study of the syndrome epilepsy. A basic reference point is that the epileptic discharged is a symptom capable of being elicited in everyone when circumstances favorable for focal ganglionic discharge are present. Individuals can be placed on a continuum of probability for seizure discharge. On one end are persons in whom there is a state of cerebral excitability favoring a seizure discharge from any of a wide range of minimal alterations in body physiology. Their threshold for seizure may be described as "low." On the other end are those individuals in whom epileptic discharge is not easily produced; their threshold is "high."

There are significant etiologic agents: (1) predisposing factors: inheritance of a nervous system with a greater tendency to discharge is the outstanding one; (2) perpetuating factors: congenital, infectious, nutritional, degenerative, metabolic, traumatic, toxic, vascular, and anoxic agents, create changes in the tissues which enable ready discharge to take place, and (3) provoking factors: psychological triggers (hostility of an intense nature), excessive fluids, fever, chemical and toxic disturbances of an acute and transitory nature, flickering lights, hearing music, fatigue. A wide range of chemical or physiological disturbance may promote abnormal ganglionic discharge.

The epileptic discharge has been described as consisting of the triad of: a central nervous system lesion which may not be discernible, recurrent disturbances in consciousness, and a characteristic pattern in the electroencephalographic examination.[1] The significant triggers are physiologic changes with or without psychologic influences of importance.

Physiologic changes may trigger the discharge: The epileptic discharge may be triggered by bodily alterations which so disturb the precariously balanced homeostatic state that the threshold of the seizure discharge is lowered and the epileptic attack occurs. Even in the absence of demonstrable physical pathology to which seizures might be related, there is strong evidence for patho-physiology which could be described as primary in creating the substrata for seizure discharge. This, however, may not be construed to negate the probability that certain qualitative life experiences may be the stimulus for producing seizures in many patients with altered physiology.

Evidence of a dysrhythmic tendency greater than for the general population is shown by persons known to have had epileptic discharges, and among their relatives.[2] Is the dysrhythmia an expression of an inherited tendency, struc-

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tural changes in the brain, or a secondary reaction to experience? The incidence of a 12% population predisposition toward epilepsy has been suggested by Lennox and Gibbs[3] study of the relatives of epileptics on the basis of cerebral dysrhythmia. What does it take to fire a seizure in addition to being predisposed by a tendency toward dysrhythmic ganglionic discharge? It is to be noted that abnormal records of a dysrhythmic character have been shown to occur in non-epileptic patients.[4] Hyperventilation was found to bring out dysrhythmic cerebral activity under conditions not associated with a convulsive state.

Emotions may influence seizures: Emotions may influence seizure discharge through both direct and indirect means. *Indirect influences* create physiologic changes which may have a trigger or precipitating influence; hyperventilation and alkalosis may lower seizure threshold, hypersecretion of adrenal corticoid except for desoxycorticosterone has been associated with lowering seizure threshold, epinephrine in increased amounts has been found to increase the duration of seizures and has been found to be secreted in increased amount with emotional agitation, hypoglycemia predisposes to seizures and may occur in neurotic inhibitions of food intake, alcoholism is induced by psychic disturbance and is known to lower the seizure threshold. An inverse correlation is suggested by Jeans and Toman,[5] who object to the assumption that anxiety is associated with hyper-excitability of the brain. In their findings heightened anxiety tends to prolong seizure latency.

More direct psychologic influences have been suggested as responsible for the seizure discharge. So-called epileptic personalities, individuals supposedly characterized by traits which could identify them as persons with epilepsy, have been described. Psycho-social stressors have been implicated as the most significant provoking etiologic agent in many patients. These may be evident and perceived on a conscious level, or not perceived on a conscious level, but still capable of acting to initiate seizures. The facts are not too clearly known. Do such stressors exert influence only on a substructure prepared for seizures by heredity, cerebral lesion, or perpetuating etiologic agents? Do they act as agents to create pathophysiology which represents a continuously predisposed state to be triggered thereafter by psychologic and physiologic stressors?

Bartemeier[6] sees convulsions occurring in so-called normal persons as archaic explosive discharges similar to epilepsy. Twitchings while asleep, teeth grinding, fasciculations, and momentary disturbances of attention can be considered as "minor type" seizures initiated by psychologic stimuli. A more diffuse discharge seems possible as an expression of inability to react to intense destructive (possibly homicidal) desires. Where the intent to act is great and the desire to control likewise intense, the conflicting tendencies may be expressed in an archaic syndrome of an explosive discharge. Fenichel[7] mentions that the experience of some clinicians shows the epileptic person to be one in whom intense destructive and sadistic drives have been repressed for a long time. Others have pointed to the gradual transition between genuine epilepsy (an archaic discharge pattern which would be appropriate to the emotional state being mobilized (——rage—— and hystero-epilepsy). Here the discharge pattern may vary from only faintly resembling typical grand mal to patterns indistinguishable from the classically described grand mal seizure. Hystero-epilepsy can be demonstrated to be a conversion reaction, the symbolic expression of a definite idea or emotion. In hystero-epilepsy, the "as if" phenomenon is dramatically in evidence (as if it were a genitally expressive act). However, patients who could have been considered as illustrative of the hystero-epilepsy syndrome have been found to have pathologic changes in the temporal lobes, showing the danger of premature diagnostic conclusion. Surgical removal "cures" the discharge tendency. Extreme care is necessary in evaluating the significance of the claimed psycho-social stressors.

Seizures and autonomic symptoms: Visceral reactions have been better understood since the work of Penfield and others on the temporal lobes. They suggest that an important area for alimentary and other visceral reactions is located in the so-called limbic lobe or visceral brain. Attacks of a seizure nature which originate in this area may include a sinking feeling, nausea, a feeling of "something turning in the stomach," hallucinations of sense of taste and

smell, gustatory movements, violent retching and paraphasia. Flushing, pallor, and cardiac rate changes are seen. Associated psychic phenomena further complicate the problem of differential diagnosis by the presence of alterations in consciousness and automatic behavior makes the diagnosis somewhat more evident.

Paroxysmal disturbances in cerebral function of a psychic nature have been produced experimentally at the operating table and by epileptogenic drugs. Signs and symptoms often perceived as "psychiatric" in nature may vary from a mere alteration of color perception to vivid auditory and visual hallucinations, forced thinking, deja vu phenomena, disturbances of mood, and automatisms. Psychiatric symptoms are then seen as aurae of a major attack. Such phenomena must be distinguished from the psychic reactions secondary to organic disease. Are the psychic elements in the syndromes significant for underlying emotional problems which act as precipitants of a seizure? Psychiatric symptom attacks often occur simultaneously with visceral attacks or may occur in close relationship to visceral or grand mal seizures. They are frequently related to temporal and sometimes frontal lobe tumors or other pathology. (Mulder).[9] The seizures, regardless of their etiologic significance, tend to create a further disbalance in living, which in turn induces further symptoms of a psycho-social nature or feed back to reinforce old symptoms.

Psychological consequences of seizures to the patient: Lennox [10,11] has emphasized that emotional perturbation does not initiate epilepsy. He calls attention to the psychological and emotional consequences of all serious diseases. Anxiety, uncertainty, and fear are present in any serious disease but public sympathy and support for the sick are common. The patient with epilepsy has oddly enough been the object of dread, public dislike and rejection. Shame, depression, bitterness, hopelessness and depreciation are frequently experienced. The emotional state cause by such mistreatment can then contribute to the precipitation of a seizure. The restrictions placed on the epileptic may further limit his prospects and accomplishments. Repeated rebuffs lead to reactions of anger ending in aggressiveness and anti-social behavior, irritations, timidity and isolation. "Decay of confidence, ambition and hope may follow."

The feeling of shame and disgrace and the desire for secrecy is a frequent family reaction. Management of school and work problems, considerations of marriage and the advisability of having children are not only an individual but a family problem. Early parental influences created by the manner of accepting and managing the problem in the family, rejection or unrealistic management of the child influences the pattern of the patient's life as well as that of the siblings. The degree to which prohibitions of sport, social activity and work are planned carefully with (or arbitrarily imposed by) patient, family, and physician will considerably influence personality development and the goals of the patient. Lennox has written, "Unhealthy sentiments such as fear, worry, shame, guilt, and despair give up their entrenched positions to hope and confidence only grudgingly."

Treatment of the patient with seizures thus becomes a complex psycho-social problem. Therapeutic interventions involve the detection and elimination of all the perpetuating and precipitating elements; to control seizures to the greatest possible extent; and to bring about social participation in living which follows closely the pattern of activities for the community in which the patient lives. Efforts need to be made to increase the skills involved in successful education and easier job placements, to encourage recreational and social activities which will diminish isolation, introversion and psychopathologic defenses which defeat successful living. "The socio-economic penalty on the epileptic is out of proportion to his real handicap." It is obvious that this handicap in turn is the basis for further psychopathology.

Epilepsy and the brain damaged child:[12] It is possible only to allude to the complex intermixture of forces that is present in the child with brain damage and seizures. Adaptations and adjustments are limited by the distortions and the incapacities from which he suffers. The personality development is limited by paucity and distortion of responses to the environment. Productive capacities are diverted and dissipated in inappropriate and ineffectual experiences. The impulsivity and poor judgment of the brain injured child further limit family and social acceptance. Frustration and ostractism in

turn have their effect on further development and influence seizure discharge. The obvious answer in treatment is the utilization of all assets toward improving the living of the patient. Control of seizures and other symptoms is but a small part of the total effort.

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SPECIAL CASE REPORT

Conjoined Twins: Report of Three Cases

William Riker, M.D., and Howard Traisman, M.D., *Chicago*

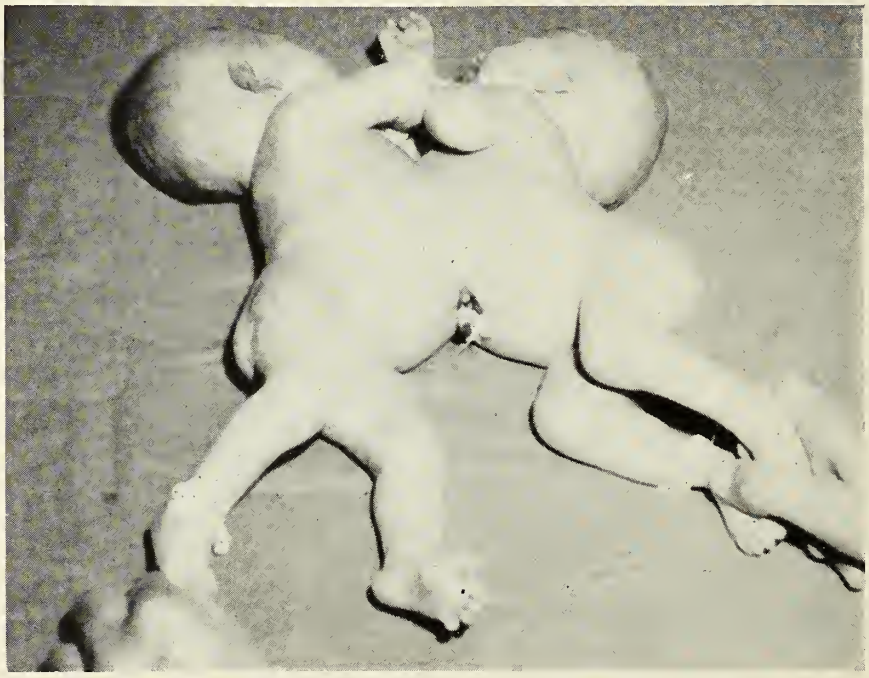


FIGURE 1. Conjoined Twins—Case No. 1—Thoraco-abdominal Fusion.

Conjoined twins are rare and their survival after birth is even more unusual. There is a certain fascination about "Siamese" twins, perhaps because some have survived many years with various forms of attachment. An example is the Siamese brothers, Chan and Eng, who were brought to the United States and widely publicized during their 63 years of life attached to each other by an upper abdominal band which is said to have contained a band of liver.

Over a period of 18 years at The Children's Memorial Hospital three sets of conjoined twins have been cared for, two of whom underwent operative separation.

The twins may be symmetrical, as in these three cases, with each twin being complete, or nearly so, or they may be asymmetrical with the incomplete twin being a passive parasite having

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FIGURE 2. Case No. 1—Heart and Liver shared by Twins.

major structures such as extremities. Fusion occurs along the long axis of the bodies in the midline—at the head (craniopagus), anterior chest (thoracopagus), abdomen (ischiopagus) or sacrum (pygopagus).

Separation of the twins may be done electively after careful evaluation of what, if any, organs are shared. Often the operation must be performed as an emergency when the weaker of the twins begins to fail. According to reports very few twins have been separated successfully. Often only one of the twins survives since frequently the vital organs they share must be given to the stronger infant.

Case No. 1: Female conjoined twins, three days of age, were admitted to the service of Doctor W. J. Potts on September 23, 1959. Their weight on admission totaled 10 lbs., 11 oz. Both were cyanotic, twin B more so than twin A. The attachment extended from the third intercostal space to the umbilicus (Fig. 1). Electrocardiograms taken on both children revealed left axis shift. Twin A had a systolic murmur but no murmur could be heard over the chest of twin B.

At operation the twins appeared to share a common heart and liver (Fig. 2). It was decided to give these organs to the more robust of the infants since twin B had hypoplasia of the right lung and was smaller. The vena cavae, aorta and pulmonary artery of twin B were tied and divided, thus dividing the circulatory connections of the twins. The liver was also detached from this infant. A generous flap of skin and muscle was taken to aid in the closure of the defect in the chest and abdominal wall in the surviving twin.

Twin A had an episode of cardiac arrest near the end of the operation but the heart was restarted without difficulty and she left the operating room in fair condition. Four hours later the child died, probably secondary to atelectasis caused by the upward pressure of the huge liver mass.

An autopsy was performed revealing a bizarre heart with the vena cavae of both twins entering a common atrium. This emptied into a common ventricle of twin B, giving off the aorta and pulmonary artery for that twin. The atrium also emptied into two ventricles of twin A, one giving off the pulmonary artery and the other



FIGURE 3. Conjoined twins—Case No. 3—Lower Abdominal Fusion, Anuses Imperforate.

the aorta. All three ventricles communicated with one another through interventricular septal defects.

Surgical correction was such that survival was possible.

Case No. 2: Male conjoined twins, 11 hours old, were admitted to the service of Doctor W. J. Potts on September 2, 1960. A breech delivery from below had been attempted but a Cesarean section became necessary. Their combined weight was 9 lbs., 7 oz. As in the previous twins, the fusion was in the thorax and upper abdomen. One child had a hypospadius. Both infants had systolic murmurs and the electrocardiograms revealed a single Q.R.S. complex. Angiocardiograms suggested that there was a single atrium and ventricle. Separation was not attempted.

The twins died at two months of age and autopsy proved the hearts to be connected at the right atrial level. The heart of twin A was otherwise normal. Twin B's heart had two atria, the left atrium emptied into a single ventricle from which came the aorta. The right atrium had no exit except into the right atrium of twin A. The livers were connected but had symmetrical vascular supply and duct systems for each twin. The twins' duodenums joined and they shared the same small bowel down to the ileum where the intestines separated again.

Case No. 3: Conjoined male twins entered The Children's Memorial Hospital on September 19, 1964, on the service of Doctor Howard Traisman four hours after birth with a total weight of 8 lbs., 3 oz. Their birth had been a difficult feet first delivery, both bodies and heads traversing the birth canal simultaneously. Their attachment extended from the common umbilical cord to the pubis (Fig. 3). One child had a bifid scrotum. There was a good deal of ecchymosis of their legs and neither child's femoral pulses were easily palpable. Twin B seemed smaller and less active than twin A. Each child had an imperforate anus.

Although the connection did not seem thick to palpation the question of a shared bladder

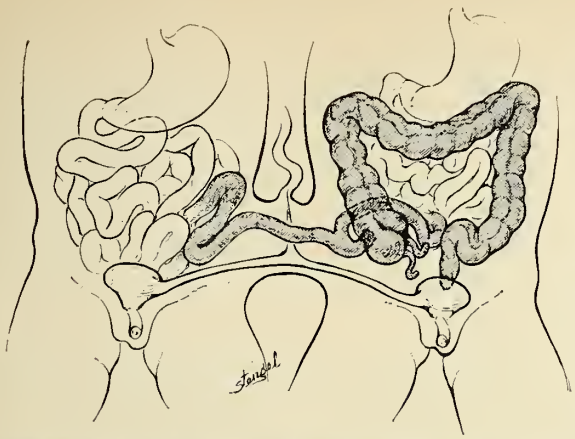


FIGURE 4. Diagram of Interconnections in Case No. 3—Terminal Ileum of Twin on Left Enters Terminal Ileum of Twin on Right. Bladders connected by Patent Urachus.

arose. A pyelogram was obtained on infant A via the cutdown that had been performed. The urinary track seemed normal without visible connection with the other twin. Because of the intestinal obstruction in both infants no studies of the gastrointestinal tract were feasible.

Ordinarily a premature child weighing four pounds or less with an imperforate anus would be treated by colostomy. However, because of the position of the infants this was mechanically impossible. For this reason, 20 hours after birth, separation was performed.

The twins were anesthetized and intubated. They were prepared and placed side by side on sterile drapes. Upon incising the skin about their connection, two structures could be seen traversing the juncture of their peritoneal cavities, a piece of small intestine and what appeared to be a urachus joining the two otherwise normal bladders. The latter was divided and the ends were closed by suture. The small bowel passing through the connection was found to be the terminal ileum of infant B which entered the abdominal cavity of twin A and emptied into his terminal ileum 8 cm. above the cecum. The cecum was bifid and had two appendices (Fig. 4).

The incision in infant B was extended upward

FIGURE 5. Twins—Case No. 3—After Separation.



and the abdominal cavity explored. No colon could be found. Both kidneys and the bladder appeared normal. The nature of the blood supply of the colon of baby A precluded any attempt to donate part of it to baby B, therefore the latter's terminal ileum was separated from his twin's and brought out the right abdominal wall of baby B as a terminal ileostomy. The ileum of baby A was repaired and a loop colostomy was performed in the descending colon. Both defects in the abdominal wall were closed without difficulty (Fig. 5).

Postoperatively the twins were in fair condition but were somewhat lethargic. Twin A weighed four pounds and twin B a little over three pounds. Twin B had shallow and irregular respirations and 12 hours after operation he had a period of apnea necessitating endotracheal intubation and artificial respiration. He was maintained on the respirator for the next two and one-half days, during which time his condition deteriorated and he finally died. Hydration and electrolyte balance were maintained. The poor respiratory efforts and lethargy suggested the possibility of brain damage.

Postmortem examination on twin B demonstrated areas of subarachnoid hemorrhage at the base of the brain and interventricular bleeding. Subcapsular hematoma of the liver was also found.

Twin A fared much better after operation. The colostomy was opened and functioned well. At seven days of age the baby was started on feeding but did not suck well. Thirty-six hours later the child suddenly developed a shock-like picture and in spite of vigorous supportive measures the child expired within 24 hours. The question of pneumonia and terminal septicemia was entertained.

Postmortem examination on baby A revealed bilateral lower lobe pneumonitis and hemorrhagic infarction of the right kidney and adrenal gland. Congenital absence of the colon was substantiated.

Blood culture grew out *pseudomonas* organisms.

Comments

Conjoined twins present an interesting diagnostic problem and all efforts must be made to determine whether organs or parts of organs are shared prior to operation. Depending upon the point of attachment, preoperative examinations may include angiogram, angiocardiograms, electrocardiograms, intravenous pyelogram, cystogram, gastrointestinal series, etc. In spite of a thorough work-up the exact extent of the interconnections may not be apparent until surgical separation is attempted.

Anesthesia and operation pose many logistical problems with two complete operative teams required in most instances. If extensive vascular interchange is present, anesthesia given one patient will suffice for both at the beginning but not so after separation. Each twin must have a catheter in a vein and blood loss must be replaced in both babies.

Postoperative care may be exacting, especially when the infants are premature, weighing between three and four pounds apiece, as in the twins in Case No. 3. Serious congenital defects, birth trauma, prematurity, and many other factors contribute to a high mortality in these patients.

Public Health: Its Interdependence with Private Medicine

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There is recurring necessity of viewing recent achievements in public health that are meaningful to the private practitioner of medicine. Physicians in the practice of clinical medicine desire better communication with their public health colleagues. Implicit in this desire is the recognition that we all share a common purpose—the dedication to human health and betterment—and a common claim to partnership in what have been termed the serving professions.

A description of achievements in public health must of necessity focus somewhat upon the State with which the writer is most familiar—Illinois. With a population well in excess of ten million, Illinois is third highest in per capita wealth and is an important unit of our nation. Illinois possesses great medical and health resources, including the American Medical Association headquarters (plus headquarters of many of the allied health professions and services[1] as well as five medical schools, three dental schools, one school of veterinary medicine, numerous centers of nursing education, and other schools for training personnel in the allied health professions and services.)

By the very act of citing assets and resources, the absence of any grounds for complacency becomes apparent. One does not even have to begin a recital of achievements to know that they will not measure up both in terms of the fullest possible utilization of available resources and in terms of the fulfillment of present-day and developing health and medical needs of the citizens. This absence of satisfaction should not be equated with pessimism. As a matter of fact it may be desirable, even necessary, because it forces us to examine the gaps and to explore means of improving our performance so that we can approach the ideal expectations we hold for ourselves. Whether we serve within the context of private medicine, the voluntary health organization or the official, tax-supported agency, we all bear the responsibility of meeting the rightful demands of the consumer who depends on us for the optimal delivery of medical and health services.

Gaps Between Private and Public Health Practitioners

Some of these gaps are rooted in the very process of our society's growth. The shift from an essentially agrarian to an industrially-based economy involves human as well as technological problems. Some sectors of our population and certain areas in our state have not experienced or shared equally in the general advancement of our state's well-being. And along with rapid social change have come problems which are of enormous concern to those in the medical and health field. One of the major problems is the distribution of our resources in terms of personnel and facilities.

Director, Illinois Department of Public Health, Springfield, Illinois.

As an astute observer noted almost two decades ago (and there is little evidence to believe that the present situation is markedly different): "Economic consideration has been the prime factor in determining the location of physicians and facilities required for the delivery of essential medical care. Physicians go in greater number where they can pursue medical practice under favorable circumstanes. In general, these areas are characterized by high avcrage income and thc presence of hospitals."

Both logic and common observation suggest that there is need to remedy disparities in the distribution of health and medical services. We are faced not merely with the challenge of moving quickly enough to keep pace with new population shifts, but also the necessity of developing more effective methods of delivering these services. The fact that there is widespread professional and public concern with this latter problem is proof that Americans look on good medical care as a benefit which should be available to all citizens, and this is the best source of hope that we shall arrive at solutions through our sound traditions of joint effort and cooperation by professionals and citizens from all walks of life, supported by governmental effort when required and requested. As an example, in the western portion of these United States there are a number of sparsely populated areas. In some of these areas reside the American Indian whose care has been underwritten by the Federal government since the last peace pipe was smoked. The Public Health Service a few years ago was given responsibility for the health of these Indian groups.[2] It has thus advanced the quality and quantity of care to an acceptable level.

Interdependence of Private and Public Medicine

Shifting from a consideration of problems that are meaningful to workers in medicine and public health insofar as our endeavors are affected by processes of social change and economic development generally, let us focus on others that are specifically germane to the relationship between private practitioners and those whose field of operation is public health. In the light of the major health problems facing us today, it becomes more and more apparent that any philosophy of absolute separation of treatment and prevention is untenable and does not reflect the reality of our efforts. While it may have some linguistic usefulness to separate our relative responsibilities, this distinction obscures and hampers recognition of a vital concept in the relationship between clinical medicine and public health—that while each has definable activities, both are interdependent, are mutually supportive and have complementary roles to play.

Viewed from the standpoint of the patient, sickness is an episode, either acute or protracted, in the life of an individual who had achieved and maintained a personal level of wellness. In sickness, the common goal for both patient and physician is a return to at least the pre-existing level of health or realistic restoration that compensates for the lasting effects of illness or injury. This thesis and mode of practice is perhaps more obvious in pediatrics where the prime objective is the maintenance of health than in other medical specialties.

If this line of reassigning is accepted, then a further distinction between medical practice and public health is largely eliminated. To state that the private physician treats the individual, while public health's patient is the community is indicative of the gap to be bridged. Both an individual's health status, the illnesses to which he is prone and his opportunities for recovery and restoration depend in large measure on the community and social conditions under which he lives.

If hard-and-fast distinctions between the practice of private medicine and public health are set aside, we can then begin to look at our interdependence through specific illustrations and achievements. All of us take much for granted that it is our right to live in a sanitary environment relatively free from the microbial agents that took such a toll in past scourges and epidemics.

One needs only a brief exposure to the health and medical problems that face the so-called underdeveloped nations to realize how medical practice and the maintenance of a sanitary environment are inter-related. One might ask how much comfort we would be able to take in our own high level of obstetrical care if we faced no alternative but to release healthy, safely-delivered newborns into a life situation

where the infant was beset by the hazards of contact with unsafe water, unmanaged human and animal waste, daily exposure to animal vectors and individuals who are bearers of communicable and infectious diseases. Under such circumstances our most valiant efforts in obstetrics come to naught.

Environmental Health Hazards

Nor can we assume that our efforts to minimize environmental hazards to health are past history. While we in Illinois can be proud that sewer systems serve 79 per cent of the state population and treatment works are provided for 97 per cent of the sewered population, problems of water pollution are very much with us as new population concentrations develop and industry expands. Under the aegis of the Division of Sanitary Engineering, Bureau of Stream Pollution, grants of $5,900,000 under the Federal Water Pollution Control Act were allocated to 74 municipal pollution abatement projects supporting sewage works projects of over $30 million. The Bureau processed 32 formal Sanitary Water Board actions for enforcement by injunction, damages, or orders to abate pollution.

A total of 2,300 surveys of public water supplies and swimming pools was made under the Bureau of Public Water Supplies, and 1,930 public water supply approvals and 244 swimming pool permits for new or improved facilities were issued. The number of new public water supplies and new swimming pools built was 39 and 234 respectively at an estimated cost of $105 million. At the present time, there are 1,429 public water supplies and 1,000 swimming pools in the state.

Radiation Control

Action to cope with one of the newer hazards to individual and community health is reflected in a wide range of activities bearing on radiation control. The Division of Sanitary Engineering completed initial inspections of all 8,000 registered radiation installations during the past two years and initiated a program of periodic re-inspection. Nearly all defects found in 70 per cent of the installations were corrected to comply with Department regulations and registration of new installations continued.

The environmental radiological monitoring program was continued and data published at weekly intervals. Specific phases of the total program were coordinated with the Illinois State Medical Society and other professional groups, the U. S. Public Health Service, and the U. S. Atomic Energy Commission. Technical assistance was provided to the Illinois Legislative Commission on Atomic Energy in its considerations of a disposal site for radioactive wastes. The milk industry was approached in developing appropriate measures for preventing excessive exposure to the population from milk containing high levels of Iodine-131. Special studies were conducted of the effects of conventional water and sewage treatment facilities in concentrating natural radioactive materials.

Public Health and Housing

Reflecting public concern, the State Legislature extended new responsibility to the Department of Public Health to act in the area of housing. Trailer park control has been exercised under statutory authority involving approximately 700 separate mobile home parks containing almost 26,000 spaces. Under authority of an Act passed by the 72nd General Assembly, migratory labor camp control was started in 1962 and during this first year, 293 camps were licensed.

The mutually supportive relationship between medical practice and public health becomes even more apparent in considering activities of the Department in the field of maternal and child health. In cooperation with the Illinois State Medical Society, obstetricians completed 123 on-the-spot investigations of maternal deaths, prepared detailed summaries of circumstances surrounding death, and participated in educational activities based on information gained with the purpose of reducing the number of such deaths.

Other Areas of Public Health Administration

In the area of prevention of mental retardation and improving care of the mentally retarded, the Division of Preventive Medicine initiated a program for detection and treatment of phenylketonuria, an inborn error of metabolism leading to mental retardation. Under this program, the Division encouraged

screening of the infant population, served as the central registry for these cases in the state, and arranged for long-term intensive follow-up of susceptible families.

The program for care of premature infants continued with three premature care centers located in the downstate area, and three in the Chicago area. Of 1,788 premature infants cared for in downstate centers, 1,372 were transported to centers by Department-owned ambulance or by privately-owned ambulances paid for by the Departmment. The Chicago City Health Department provided ambulance transport for 965 of the 1,359 infants cared for in the Chicago centers.

The most extensive and widely-publicized instance of cooperation between public health agencies and county medical societies took place in programs of polio immunization. Through its Bureau of Epidemiology, the Department purchased and distributed more than 3 million doses of Salk vaccine. Also, 1 million doses Type I oral, live virus vaccine were purchased, and in cooperation between the Illinois State Medical Society and the Department's Polio Technical Advisory Committee, recommendations were issued for use of the live-virus vaccine in community programs sponsored jointly by county medical societies and public health agencies. On January 14th of this year, the use of Type III, live-virus vaccine was authorized by the Illinois State Medical Society and the Department.

Hill-Burton and the Illinois Public Health Service

Since good hospital facilities, conjointly with the physician's office, provide the major base for the provision of medical care, it may be worthwhile to review Department of Public Health activities in extending available facilities and maintaining standards. The Department has administered the Federal Hill-Burton (Hospital and Medical Care Facility Construction Program) grant-in-aid program since its inception in 1946. This year, the Department has approved 37 applications for construction of hospitals and related medical care facilities in the state. Twelve of these were new general hospitals or additions to existing general hospitals. In addition, special category projects were approved for construction grants: 4 psychiatric units, 3 local health departments, 3 additions to professional nurse training schools and dormitories. Additional special category projects included: 6 nursing homes, 3 chronic disease units in hospitals, 4 diagnostic and treatment units in hospitals, and 2 rehabilitation centers. Under the Hill-Burton program, the state has allocated approximately $14 million of federal grant funds to these projects, matched in each instance by local support and it is expected that some 20 additional hospital and medical care facility projects will be considered for grant by the end of June 1963.

Public Works Acceleration Act

Further impetus to enlarging hospital and medical care facilities is afforded through the Public Works Acceleration Act, passed by the Congress in September 1962 and designed to provide federal construction grants to eligible projects in areas of the state having substantial unemployment and problems of economic under-development. The Department of Public Health is responsible for administering this program as far as hospital and medical care facilities are concerned and already eight projects have been developed, with total construction costs of nearly $12 million and involving eligibility for nearly $6 million of Public Works funds.

Hospital Licensing Act

Since 1953, the Department has been responsible for administering the Hospital Licensing Act, which is a reflection of the state's concern with providing to the practicing physician a base of operations that matches standards of good medical care in terms of both physical facilities and management procedures. Approximately 300 hospitals are licensed annually, following inspections by Department personnel. During the past year, the Department became increasingly concerned with numerous proposals to establish new large hospitals where there were questions as to the character of sponsors or to financing arrangements. In an effort to protect the public interest in this important matter, the Department, with the advice of the Hospital Licensing Board, now requires all sponsors to disclose fully their identity and the facts of ownership and financing.

Community Health

The problems of providing services and care for the chronically ill and aged are increasingly gaining the attention and efforts of all who work in the medical and health field. In moving to assume its share of responsibility in this area, the Department has used funds amounting to approximately $850,000 provided under the Community Health Services and Facilities Act of 1961. This Act is directed specifically to the provision of out-of-hospital services and facilities in recognition of the principle that care for the chronically ill and aged is a continuous and progressive process in which primary prevention, early diagnosis, treatment and after-care, whether in specialized facilities or in the patient's home, are interconnected. Out-of-hospital services such as home nursing care, meals on wheels, home helper service, multiphase screening programs for heart, cancer, diabetes, glaucoma and other chronic conditions were developed in localities throughout the state. A sound motion color film on stroke rehabilitation was produced in cooperation with the Illinois State Medical Society for use in hospitals, nurses' training schools and before medical society groups. Approximately 100 stipends were granted to nurses for special training and rehabilitation.

Nursing home standards have been revised and up-graded. At the beginning of 1961, there were 896 nursing home and related facilities with 34,200 beds; now there are 923 facilities with 37,000 beds, an increase of 2,800 beds for the aged. Approximately 200 new homes providing from 50 to 200 beds in each facility are in the blueprint stage or are under construction. The Department has conducted three institutes on nutrition for nursing homes to improve the quality of food being served.

It would be beyond the scope of a single article to attempt an exhaustive, comprehensive review of all the activities of the Department of Public Health in the past year. Those that have been cited were selected in the hope of illustrating the mutuality of our interests with those who practice clinical medicine in the state. The purpose of this article will have been served if it has been made clear that public health is deeply concerned with facilitating and enhancing the conditions under which medicine is practiced; with extending the physicians reach in the management of his patients, and with joint action in cooperation with organized medicine to protect the health and improve medical care of our states residents. This emphasizes the advancement of free enterprise medical practice by appropriate official public health agency cooperation.

To refer to some further achievements briefly, the Department of Public Health was pleased to participate in the planning and activities of the Illinois Center for Zoonoses Research. Established by an act of the Board of Trustees of the University of Illinois in 1960, the Center is the first institution in the United States devoted specifically to fundamental research on the diseases common to man and others of the animal kingdom. The Director of the Department is a member of the Center's senior staff, serving in the capacity of Professor of Public Health.

Illinois joined four other states in the nation by establishing a Toxicology Laboratory in Chicago under the Department's Division of Laboratories. This service will greatly assist law enforcement officials, among them coroners, in their examinations and identifications. Another laboratory is being planned for Springfield. Illinois now has 80 Poison Control Centers operating in hospitals to treat accidental poisonings and provide information to physicians on a 24-hour basis.

The rheumatic fever registry in the Division of Hospitals and Chronic Illness now exceeds 13,000 cases. The Department provides penicillin without charge to physicians to aid in case management. Screening programs for cervical cancer (Pap smear) were conducted to facilitate early diagnosis and prompt physician referral.

In June 1962, the Department installed a computer which has made possible a considerable expansion in the collection and processing of vital statistics and the availability of this information. The data now being processed include birth and death certificates, marriage and divorce records, cases of reportable diseases, payroll, inventory data, activities performed by local and state health departments, special studies and research projects with many additional projects and applications planned.

To return to the principle which is central to this article—that clinical medicine and pub-

lic health serve interdependent functions, this is an appropriate point to redress an imbalance. Emphasis has been laid almost exclusively on those achievements and activities in the field of public health which can be seen as supportive of the practice of medicine. It is necessary to emphasize equally that unlike the tax-supported agency which is burdened with official responsibilities that often preclude experimentation and new program approaches, private medicine and voluntary health groups have the freedom of an enterpreneur who can improvise, experiment, perform research in the manner that most effectively represents the philosophy of our Amrican system of free enterprise.

With the high value we place on the individual's right to health and well-being physical, social and emotional, it is the physician, functioning in his office, the hospital and the community, who accepts ultimate responsibility for the individual in health and in sickness.

The physician, as an individual and as a member of his professional society, is practically without peer as a source of influence and leadership in his community. It is to him and to his organization that public health must turn for counsel and assistance in carrying out what is the most vexing task that faces public health in Illinois. The Illinois State Medical Society has affirmed the principle that public health coverage in the form of home-based agencies should extend to every area of our state. This at present is not the situation in Illinois. Approximately 30 per cent of our population and 70 per cent of our counties are not served by local full-time health departments. By contrast, almost every county and locality has a functioning medical society.

There is much work to be done so that leaders and communities at large are convinced that public health services make a valid and needed contribution to their well-being worthy of the kind of moral and financial support which local public health agencies require.

With the leadership that the physician in the community can provide, we may look forward to that day when each and every citizen of every state can expect to receive the best curative, preventive and health-promoting services that private medicine and public health working together can bring.

REFERENCES

1. As listed in the Social Service Directory issued by the Welfare Council of Metropolitan Chicago.
2. Transfer of the health program for Indians from the Bureau of Indian Affairs of the Department of the Interior to the Public Health Service of the Department of Health, Education and Welfare took place on July 1, 1955. (PHS Publication No. 531, "Health Services for American Indians).

Nutrition in Teen-Age Pregnancy

Studies of the outcome of pregnancy have shown that complications such as toxemia, pelvic contraction and delivery of immature infants are seen more frequently in very young girls than in older women. Although age *per se* is a significant factor, the possible involvement of nutrition is often overlooked. Poor nutritional status appears to be related to increased rates of prematurity, cesarean section and perinatal death. Diet studies during pregnancy suggest that calcium, niacin, and ascorbic acid consumption may be less than half that recommended; protein, iron, thiamine and riboflavin may also be problems. Dietary habits are associated with educational level, income and prenatal care. Need for nutrition education and formation of good dictary habits early in life, as well as during pregnancy, cannot be over-emphasized. This is particularly true for the teen-age mother where nutritional stresses of pregnancy are superimposed on the increased needs normally associated with adolescence. *Dairy Council Digest, 35:5 (Sept.-Oct.), 1964.*

IMJ EDITORIALS

Service Somnambulists

Little is known about sleepwalking in late adolescence and adulthood. Most victims are males and the condition is considered a symptom of a variety of emotional and psychic disturbances (conditions).

The results of a detailed psychiatric study on 14 navy and marine somnambulists (sleepwalkers) were published recently in the Archives of General Psychiatry. The authors found that 35 per cent were schizophrenics; 28 per cent had schizoid personality traits; and the remainder were (mainly) neurotic.

All displayed signs of inadequate male identification—a tendence to prefer the feminine role. They had passive and dependent strivings, with conflicting feelings in regard to aggression (male) and passivity (female).

Theodore R. Van Dellen, M.D.

Silent Gall Stones

Are asymptomatic gall stones an indication for cholecystectomy? Most surgeons advise surgery especially when the individual has a life expectance of more than six years. They defend their position on the observation that many of these patients develop symptoms ultimately and may require surgery at a time when the risk is greater.

This was brought out several years ago by Lund[1] of Denmark. He followed 526 patients from five to twenty years and at least one third to one half of the patients subsequently developed severe symptoms and/or complications. All had asymptomatic cholelithiasis when seen originally. Twenty-five per cent developed acute cholecystitis and common duct stones.

The mortality proved to be at least 2.7 per cent. A number of deaths were avoided by subsequent surgery. Lund also noted a marked increase in the mortality with advancing age. Over the age of 60 there was a minimum mortality of 7.2 per cent. Oldsters tolerate simple surgical procedures on the biliary tract very well; it is a different story when it comes to complicated procedures.

Only three developed cancer of the gall bladder. He concluded that the risk of carcinoma of the gall bladder is no greater than the operative mortality in elective cholecystectomy (less than one per cent). The risk of cancer, per se, should not be the indication for prophylactic cholecystectomy. It should be an added inducement for surgery since it is the only effective preventive measure against this type of malignancy.

Theodore R. Van Dellen, M.D.

1. Lund, Gorgen: Surgical Indications in Cholelithiasis. Ann. Surg., 151:153 (Feb.), 1960.

Death and Researchers

Who killed Cock Robin? This catchy title on a News Release by Shirley Linde and Northwestern University concerned a question posed by Dr. Carl A. Dragstedt. He wrote in the current issue of "Prospectives In Biology and Medicine" that researchers begin to die, scientifically speaking, shortly after their 35th birthday. His researcher in question was Dr. Cockrell Robinson (Cock Robin), an internationally recognized authority on histamines and allergic reactions. This fictitious character came to a medical school as an assistant professor and had the good fortune to begin his research in a fertile area that produced articles which aroused the academic world.

In other words, he was a real stemwinder and in due time was appointed on the editorial board of a scientific journal. This, he was told, requires no extra time ". . . . since he would merely read in advance of their publication the same manuscripts he read when published." But instead, he was soon enmeshed in arguments

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Editorials (Continued from page 461)

with authors relative to data, use of tables, graphs, illustrations, grammar, etc.

He did a good job (in addition to his regular school duties) and soon was appointed to the Council on Drugs of the American Medical Association. He was asked to describe new drugs, find suitable generic names, and arbitrate these with representatives of international bodies—all to lessen the confusion that prevails on the subject.

This led to his appointment to the Pharmacology Study Section of the National Institutes of Health where he began to review the hundreds of applications from research project directors including their reprints, letters of recommendation, and supporting documents.

Dr. Robinson then is elected to the Revision Committee of the United States Pharmacopoeia and promoted to an associate professor at his university. His increased stature was recognized at home and in time he was asked to sit at the center table at the faculty club. Meanwhile his wife senses the importance of their position and they build a beautiful home on Uppity Hill, and to save money, the upstairs was left unfinished —for Dr. Robin to complete in his spare time. For additional revenue, she gets him to prepare a popular lecture to give to the PTA and other groups.

The Dean assigns Robin to assorted academic responsibilities, including chairman of the curriculum committee and a membership on the admissions committee. He was made a student adviser to "act as employment agency, conduct a financial lifeguard service, fabricate evasive stories for students who had trouble with draft boards, and attempt to cover up the inevitable misuse of liquor in fraternity houses." And all this in addition to his primary responsibility of teaching medical students.

Dr. Dragstedt then tells how Dr. Robinson's research interests reach a crises when other researchers begin to obtain better results using electric eels and giraffes. There are not obtainable at his university so he arrives finally at a stage of technological unemployment.

Why do academic men accept or take these jobs? According to Dr. Dragstedt, "They represent a recognition of the individual's ability and, indirectly, are a tribute to his university which he feels he ought to recognize and encourage."

Dr. Dragstedt ought to know because he has had most of these jobs during his years as chairman of Northwestern's department of Pharmacology. His brother Lester R. who was retired recently from the University of Chicago did the same. Many physicians in Illinois are thankful because they owe a great deal to these men. We want the Dragstedt brothers to know that we appreciate the fame and honor that their extra work brought to our area and to our medical schools.

T. R. Van Dellen

Commentary on 5th Edition—Health Education AMA/NEA

For the lost wanderer in the Sahara, a murky pond appears as an answer to a prayer. For the seasoned mountain climber in the Alps, a grassy hillock is of little consequence. This in essence expresses our view of the completely rewritten 5th Edition of the AMA/NEA *Health Education*. When viewed in comparison with prevailing books on school health in the United States, this volume assumes notable proportions. If viewed in respect to the functional, lucid, stimulating and useful books which might be expected to abound on this subject, this volume in all probability would pass unnoticed.

Obviously, this book suffers initially from being a revised edition of a series of statements on school health education extending over a period of 38 years. This limits freedom from the shackles of outmoded opinions, concepts and practices of the past. This is a particular handicap in a subject area which has unfortunately enjoyed little fresh thinking during the past 10 years.

While both health and education specialists, teachers and administrators are apparently in agreement that recent progress in school health

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Editorials (Continued from page 466)

leaves much to be desired, it is not any easy matter to alter prevailing school health education patterns. One reason is the ever increasing diversity and expanding dimensions of school health itself which are outcomes of the complexity of our society. Another reason is the recent advent of specialists in various segments of the health field such as dental health, nutrition, safety, mental health, accident prevention, VD, drug addiction and alcoholism. These specialists work in progressively narrowing bands of the school health program, they advocate and exert pressure for an overwhelming volume of information to be imparted, learned and applied. This information comes from the specialists to teachers neatly packaged in such forms as graded units, projects, programs, handbooks, teacher guides with such impelling imperatives that school people are frequently at a loss to distinguish for their particular situations the essentials from subsidiary material. Unfortunately, school people receive too much hard sell in these specialized health areas from external sources and too little understanding and guidance as to how to adopt available material and programs to individual school/community needs and problems. The 5th Edition of *Health Education* provides little more than cursory attention to this problem.

In all fairness, it must be said that the 5th Edition covers quite comprehensively the dimensions and concepts of school health education. There is a wealth of information throughout the book. This is particularly true in the chapters dealing with the socio-scientific basis and attitude and behavior change in health education. Of note also are the up-to-date selected references at the end of each chapter. The photos are handled with sensitivity and are perhaps the saving grace of the volume.

However, aside from the dull style in which the book is written, it bespeaks of the communication and conceptual gap which exists between writers of school health education books and those who might wish to use them. The unfortunate assumption which seems to be made is that because the body of health information is now on a scientific basis, it can also be taught scientifically. Teaching is still an art, and to date, the leaders in school health education do not seem to be in agreement as to the minimum body of health knowledge, attitudes and practices which should be learned at any particular grade level. Also any reliable, let alone standardized, progression of teaching health is yet to be established. This does not seem to be recognized or dealt with in the 5th Edition.

In conclusion, it is interesting to note that *Health Education* is invariably required reading for all health education majors in schools of public health. However, it is difficult to find a student or graduate who has read the book in its entirety or who refers to it with anything but distaste as a dull, laborious reference. Without doubt, this book contains the essential nuggets of school health education, but few seem to have the inclination to pan them out.

Lynford L. Keyes
Chief Bureau of Health Education
State of Illinois Dept. of Public Health

International Health Symbol

The emergency medical identification symbol sponsored by the American Medical Association for universal use was adopted by the Assembly of the World Medical Association at their meeting in Helsinki, Finland, in June, 1964.

The resolution stated "that this symbol—be adopted by the World Medical Association as the universal emergency medical information symbol, and that its use on identification tags, bracelets and cards be encouraged among the people of the world."



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Spacelabs, Inc., Van Nuys, Calif., offers a new system of physiological instrumentation applicable to a wide range of medical research.

Designated as the Model 130 Biotel, it provides the capability of monitoring up to eight physiological parameters using either hardwire or telementry transmission. The system consists of modular building blocks which can be arranged in a wide variety of configurations to suit many applications.

Biotel modules are in use for monitoring the electrocardiograms of critical heart patients in hospitals and for maintaining a comprehensive check on test subjects engaged in space flight research. The flexibility of the Biotel solves a major problem in medical research by allowing the researcher to tailor a system to his particular needs. Modules are available for monitoring the electrocardiogram, respiration, electroencephalogram, temperature, electromyogram, galvanic skin response, and voice either singly or in combination.

Biotel components include sensors, signal conditioners, transmitter, power supply, and receiving station. The sensors, signal conditioners, (and transmitter if desired) are worn in a specially tailored vest. The receiving station contains a receiver (for telemetry transmission only) and discriminators which are used to drive most standard strip chart recorders or oscilloscopes.

Particular attention has been given to the sensors which are based on the design developed for the Project Mercury astronauts.

A detailed handbook of operating instructions is supplied with the system which simplifies operation and maintenance.

The Biotel concept grew out of Spacelabs work in developing a wide variety of aerospace bioinstrumentation including that for the forthcoming Gemini manned spaceflight program. Improved operational characteristics and flexibility make the Biotel unique in the reliability and service it offers to medical researchers.

CHEMICALLY SAFE CONTACT LENS

Three years of diligent research have produced a new contact lens material which provides an answer to recent claims against these seeing aids, according to an announcement by Dr. Newton K. Wesley, Director of National Eye Research Foundation, a not-for-profit organization, dedicated to better vision.

The new antiseptic lens has tested out to be chemically safe. Its bacteriostatic action arrests the growth of germs, thereby preventing or retarding possible infections caused by carelessness of the wearer, or by dust particles getting into the eye.

The antiseptic contact lens was developed by Dr. Newton K. Wesley and Dr. George N. Jessen, optometrists and recognized leaders in the contact lens field, who through their continuing research have developed a number of special contact lenses for correction of vision and for improvement of vision in cases where the deficiency cannot be corrected by other means.

The research which produced the new antiseptic lens was confirmed by bacteriologist John R. Torgerson, B.S., M.S., M.D., now part of the medical faculty of the University of Illinois; Rosner-Hixson Laboratories, a nationally recognized scientific research organization, and by the Department of Ophthalmology of Northwestern University.

The first step in the development of the antiseptic contact lens was the creation of a plastic in which germ-inhibiting substances could be incorporated by chemical means. After a long search, and many trials, the right antiseptic substances were found and incorporated into the plastic. To assure an impartial report,

(Continued on page 472)

NOW IN HANDY-PACK

Argo Pure Corn Starch the Ideal Baby Powder

ARGO HANDY-PACK It's the ideal plastic dispenser for dusting powder on babies. By squeezing the sides, the new Handy-Pack puffs out the exact amount of Argo required. Easy to use, the Argo Handy-Pack is reusable, too. Just remove cap and refill from the yellow and blue Argo packages to have a permanent, economical dusting powder dispenser.

ARGO CORN STARCH Argo Corn Starch is safer than ordinary baby powder because it contains no abrasives. Argo Corn Starch dries up moisture . . . soothes irritating rash and chafed skin. And Argo leaves a velvet-smooth film on skin to guard against further irritation. Argo in the new plastic Handy-Pack is pure corn starch in its most convenient form.





Send for a free Argo Handy-Pack filled with pure Argo Corn Starch

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Address_____

City_____ State_____ Zone_____

(Continued from page 470)

Drs. Wesley and Jessen retained Dr. John R. Torgerson, the bacteriologist, to carry on the required study.

After a favorable report from Dr. Torgerson covering 1,843 separate bacteriologic experiments, the antiseptic contact lenses were subjected to animal wearing tests. Abrasions were artificially created on the eyes of some of the 243 rabbits used in the study, and it was found that the new lens definitely shortened the time required for healing. The other rabbits wore an antiseptic lens on one eye and a regular contact lens on the other, to determine how well the new lens would be tolerated. No differences could be noted, establishing that the antiseptic lens, being well tolerated, would be as acceptable to the eye as the regular contact lens.

To determine bacteristatic effectiveness, massive doses of bacteria were instilled into the eyes of the rabbits, and, for both the gram-negative as well as the gram-positive bacteria tested, the new antiseptic lenses inhibited bacterial growth effectively, whereas the regular contact lenses could not do so.

Despite the success of the rabbit experiment, Drs. Wesley and Jessen asked the Rosner-Hixson Laboratories, a widely accredited, unbiased, independent research group, to repeat the study for confirmation. Their report established that the new antiseptic lens was well tolerated, and that it exerted a definite bacteriostatic influence.

The final and most important step—the experimental wearing of the new lenses on the eyes of human beings—was undertaken by the eye clinic of Northwestern University. After the wearing of the new antiseptic contact lenses by 65 people in a prolonged study, it was concluded that these lenses, made of a new plastic with effective bacteriostatic influence, were well tolerated by the human eye.

The new lens demonstrates the value of the continuing research carried on in the ophthalmic field. It is through such developments as the antiseptic contact lens, made possible through the teamwork of laboratories, universities, and doctors of the sciences of optometry and ophthalmology, that professional care of the vision of the nation is assured.

VIEW 20 SLIDES AT ONCE

Twenty 2 x 2″ photographic slides can be seen at a single glance in normal room light with a patented new visual filing and selection system introduced by the VPD Division of the Joshua Meier Company.

Called "Slide Sho," the new VPD product is a semi-rigid molded plastic page with 20 niches into which any 2 x 2″ slide may be stored easily and quickly. A heavy duty raised rib around the perimeter of the page offers extra strength and allows the pages to be nested together, keeping slides dust free. Each translucent page is backed with an exclusive diffusion coating which allows maximum light through evenly making viewing easy in normal room light.



Semi-rigid molded plastic page with 20 niches is feature of "Slide-Sho" that permits viewing of 20 2″x2″ slides at once.

The VPD Slide-Sho pages will fit 3 ring binders, multi-ring binders, portable files, desk files and all permanent cabinet filing systems. This versatility and portability, plus the ease of identifying and selecting slides, offers many advantages over "tomb-type" files, which merely store slides.

Slide-Sho pages are ideally suited for filing slide collections requiring ready reference, visual selection, sequence viewing, and ease of expansion. Pages are lightweight, weighing only 1 ounce, and compact, allowing 20 pages per one inch of storage space. The system is already being used by a number of clinical, library, laboratory, research, and educational centers, as well as by many industries for presentations, visual catalogues, displays and standard slide filing purposes.

VPD Slide-Sho pages are priced at $.75 each, and are available from photographic or stationery suppliers. Further information is available from the VPD Division, Joshua Meier Company, Inc., 601 West 26th Street, New York 1, New York.

WINSTROL—ANABOLIC AGENT

Weight gains ranging up to 19.5 pounds were produced by the anabolic steroid Winstrol (stanozolol) in 102 of 105 underweight, chronically-ill patients averaging 55 years of age, Dr. Manning J. Rosnick reports in *Clinical Medicine* (71:989, 1964).

The average weight gain was 6.2 pounds during the treatment period, which lasted from three days to six months. Winstrol, a new steroidal pyrazole compound, was prescribed to improve the nutritional condition of the subjects, who were all office patients. In addition to being underweight, many had such conditions as osteoarthritis, chronic hypertension, asthma, angina pectoris and alcoholism. Poor appetite was common.

(Continued on page 477)

an ironclad case against anemia*



Heptuna® Plus

arms your patients to fight anemia due to deficient iron intake and loss of blood.

Its formula has been improved 6 times in 12 years to reflect findings of proven nutritional importance in oral therapy of hypochromic microcytic anemias.

Current Formula

Ferrous sulfate	340 mg.
Iron (from ferrous sulfate)	100 mg.
Desiccated liver, N.F. (undefatted)	50 mg.
Vitamin C (from sodium ascorbate)	150 mg.
Vitamin B_{12} (as Stablets®) with intrinsic factor concentrate (noninhibitory)	½ N.F. oral unit†
B_1 (thiamine mononitrate, U.S.P.)	3 mg.
B_2 (riboflavin, U.S.P.)	2 mg.
B_6 (pyridoxine hydrochloride, U.S.P.)	2 mg.
Niacinamide, U.S.P.	15 mg.
Calcium pantothenate, U.S.P.	1 mg.
Cobalt (from cobalt sulfate)	0.1 mg.
Copper (from copper sulfate)	1 mg.
Molybdenum (from sodium molybdate)	0.2 mg.
Calcium (from dicalcium phosphate)	37.4 mg.
Iodine (from potassium iodide)	0.05 mg.
Manganese (from manganese sulfate)	0.033 mg.
Magnesium (from magnesium sulfate)	2 mg.
Phosphorus (from dicalcium phosphate)	29 mg.
Potassium (from potassium sulfate)	1.7 mg.

*Hypochromic microcytic anemia.
†Potency established prior to mixture with other ingredients. Stablets, U. S. Pat. No. 2,830,933.

Precautions and Side Effects: Because some patients with pernicious anemia do not respond to oral Vitamin B_{12}, they should be followed with periodic laboratory studies. Anemia is a manifestation of an underlying disease and it is necessary to make an etiological diagnosis. In a small percentage of patients, iron therapy causes gastrointestinal irritation. In these patients, administering Heptuna Plus with meals or reducing the dosage usually will alleviate the symptoms.

Supplied in bottles of 100 capsules. Rx only.

J. B. Roerig and Company
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®
New York, N.Y. 10017

Rx REVIEWS and NEW PRODUCTS

(Continued from page 472)

Most of the group reported a feeling of well-being, being less tired and not so tense, as well as gaining weight. Those with anorexia said their appetites improved.

Winstrol, according to Dr. Rosnick, acts by increasing retention of nitrogen and minerals, reversing tissue-depleting processes and promoting better utilization of dietary protein.

Referring to undesirable side effects, he says:

"Unlike other drugs of this kind, stanozolol showed almost no androgenic activity; thus it can be given to female patients with little expectation that virilizing effects will appear. Also, unlike other anabolic steroids, effects such as sodium retention with resulting edema were minimal."

Dr. Rosnick calls attention to the fact that "weight gains of 10 to 12 pounds in six weeks or less were seen frequently.

"In older, often debilitated, patients, such weight gains can contribute significantly to improving the patient's general health and his sense of well-being."

Winstrol is manufactured by Winthrop Laboratories.

CODE 99—"GROUP CALL"

Teletracer International, nationwide distributor of selective pocket paging systems, introduced a new application for its equipment at the American Hospital Association Merchandise Mart held at McCormick Place in Chicago last month.

The new feature is known as "Group Call," but is often referred to as "Code 99" because of its use for Cardiac Arrest purposes. Group Call makes possible the alerting of several individuals simultaneously, as well as selectively when desired. Members of the group are furnished small light-weight (4 ounces) signal receivers that are easily carried in their pockets. Each unit has its own calling number. To locate any individual member of the group, the page operator merely depresses their call number and the signal is directed to the unit in their pocket. Following the signal, the operator can give a voice message to the individual.

When it is necessary to alert the entire group, Group Call is selected on the control and ALL receivers are simultaneously alerted and may then receive a voice message. The signal received in a GROUP CALL differs from that of the ordinary page call so that it is readily distinguished by the individual.

Although designed primarily to alert members of a Cardiac Arrest team, Group Call can be used to alert maintenance personnel, security officers, residents, etc. It is also possible to set up several different groups within the same system. Code 99 has been installed at the Tufts-New England Medical Center in Boston, Massachusetts as an added feature to their 125 receiver Tele-Tracer Paging System.

Technical specifications on Group Call are available from Teletracer International located at 16 East 40th Street, New York 16, New York



over 80 years' specialized experience
in the restorative treatment of

"the Problem Drinker"

At The Keeley Institute your patients are assured of receiving:

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- full cooperation throughout with the referring physician
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Anatomy: A Regional Study of Human Structure. Gardner, Gray, O'Rahilly, Second Edition, W. B. Saunders Co., Philadelphia and London, 1963.

The first edition of this text appeared in 1960. The present edition has been brought to date by revision of text material, references, and illustrations.

Part One, General Anatomy, devotes 97 pages to the body systems as well as Anatomy in general, Development and Growth, and Radiological Anatomy. Although a few pages are elementary (e.g. Viscera) most of Part One assumes a familiarity with the vocabulary of the basic sciences and serves more as a brief, fact-filled review, than a means for orientation.

Parts Two to Eight (857 pages) are divided into six regions: The Upper Limb, The Lower Limb, The Thorax, The Abdomen, The Pelvis, The Back, and Head and Neck. The text incorporates recent information but retains the style of classical descriptive anatomy. The general tendency is to describe the region systemically with added paragraphs of pertinent embryology, comparative anatomy, histology, and physiology. Clinical applications pervade the text—usually as brief non-dramatized facts; occasionally by paragraphs (e. g. diaphragmatic hernia, clubfoot, mechanism of urination); and there are special sections such as those on Physical Examination of a patient, and Radiography. The chapter on the bony pelvis reads much like a textbook of obstetrics.

There are 58 plates of radiograms demonstrating bones and ossification centres, joint movements, soft tissues, and normal anatomy shown by diagnostic radiological procedures.

Except for 9 photographs, the remaining illustrations are conventionalized drawings. Usually these are intended to clarify some special feature, and as the authors point out, are not intended to replace an atlas. For example, the muscles of the forearm are described but not illustrated whereas there are several drawings of wrist relationships and intrinsic muscles of the hand.

There are numerous selected up-to-date and older references to both anatomical and clinical literature which should provide an easy introduction to any subject a reader might wish to pursue.

A Glossary of Eponyms, and a useable index (in spite of several errors) complete the text.

This is a scholarly work replete with recent information which occasionally attains depths beyond the interest of the average freshman medical or dental student. Neither the regional approach, which is convenient; nor the attempt at concise description (about 1000 pages), should be construed as being superficial or as particularly easy reading.

L. E. Wragg M.D., Ph.D.

The Specialties in General Practice. Third Edition. Russell L. Cecil, M.D., and Howard F. Conn. Pp. 676. Philadelphia and London, 1964. W. B. Saunders Company.

This book will be a useful handbook for general practitioners. The editors are well-known and the 18 contributors are distinguished in their specialties. Several chapters were combined in this third edition for the sake of comprehensive coverage. The chapter on *Orthopedic Trauma,* for example, is a combination of previous chapters on orthopedic surgery and fractures and dislocations. Chapters on *The Clinical Laboratory, Neurology,* and *Industrial Medicine* were added to broaden the value of this book. We object to combining syphilology and dermatology in the same chapter because syphilis is not primarily a skin disease. On the other hand, the chapter on *Psychiatry* is well organized, considering the magnitude of this specialty.

T. R. Van Dellen, M.D.

Diseases of Metabolism. Detailed Methods of Diagnosis and Treatment. Edited by Garfield G. Duncan, M.D. Ed. 5th, pp. 1551, Saunders, 1964. $28.00.

The aim of this text is "to provide a bridge of useful understanding between investigator and practitioner." This it does, as well as keeping pace with new developments. One of the new chapters (covering more than 100 pages) is devoted to inborn errors of metabolism, disorders that have assumed much importance in recent years. Other new chapters discuss the metabolic considerations in disorders of the digestive, respiratory, circulatory, and nervous systems. The 20 contributors offer a variety of styles of writing but in general the authors have done a professional job. Dr. Duncan himself writes simply and understandably on his particular specialty—diabetes.

T. R. Van Dellen, M.D.

Scholarship Loans Offered by Medical Assistants

Scholarship loans in the amount of $300 are now available from the Maxine Williams Scholarship Fund, according to the Scholarship Committee of the Board of Trustees of the American Association of Medical Assistants. They are to be allocated by the Committee to five local chapters requesting such funds whose proposed school and candidate seems best to fulfill the hopes of the training program for medical assistants.

Requirements are as follows:

1. The component society shall submit to the Scholarship Committee a request for one scholarship loan, together with the information as to the type of program available and a copy of the application form submitted by the candidate for training. The course or school must have the approval of the local medical assistants chapter and their medical advisors. It shall *not* be a commercial school.

2. The component chapter shall be charged with the responsibility of the administration of said loan, making a report to the Scholarship Committee twice yearly.

3. An applicant for training must have the following qualifications:

a. Be a high school graduate.

b. Be of good character as attested by a letter of recommendation from school principal or counselor, minister, lawyer, etc.

c. Indicate an interest in becoming a certified medical assistant.

4. A scholarship recipient agrees to repay the loan when she becomes employed. This shall be a matter of honor and no note shall be signed.

5. In order to be considered for 1964 applications must be received by the Scholarship Committee by July 15, 1964.

Applications may be obtained by any component society by writing to the AAMA Executive Office, 510 North Dearborn, Chicago, Illinois. You will notice the time limit has expired for the year 1964 but will be continued each year according to present plans.

Comment

Illinois is woefully lacking in training schools for Medical Assistants. We need good training courses throughout the State of Illinois to train those who would like to go into the field. There are numerous Junior Colleges, Universities *et cetera* in Illinois—we should be able to interest them in this program. For this we need the help of our doctors: We need someone with the prestige and "know how" to contact these various schools with us and let them know the doctors too are interested in this type of training. Otherwise our Illinois potential for medical assistants, who truly want to go into this line of work, receiving the opportunity to take advantage of these scholarship loans is practically non-existent. Other states with the educational training facilities for Medical Assistants will not be able to accommodate too many Illinois Medical Assistants as they have more than ample residents of their own states to fill their courses. May we have some volunteers?

Clinical Abstract

EFFECTS OF MEASLES AND MEASLES VACCINE ON THE TUBERCULIN TEST

Twenty-two tuberculous children in whom typical measles developed in the spring of 1962 were studied at Kings County Hospital Center. Seven were admitted with measles and found to have tuberculosis. Measles developed in 15 tuberculosis children in the hospital, 8 of these being modified by gamma globulin. The measles was mild to moderate in all the children, with complications in only two—a pneumonia and a mild encephalitis.

In addition to these 22 children, two separate groups of tuberculous children were given live measles vaccine and studied in similar fashion. Group 1 consisted of 14 children who were exposed to a child with measles prodromes and given 1 ml. of live measles vaccine two days later along with gamma globulin, 0.2 ml. per pound of body weight. Group 2 consisted of 10 children without exposure to measles who were given live vaccine without gamma globulin. Nine of the children in Group 1 and 6 of those in Group 2 had clinical and laboratory evidence of vaccine measles. Each had significant antibody-titer changes.

All the children were given isoniazid and para-aminosalicylic acid (PAS) throughout the period of the study, which for each child was about a year.

All children were tested on the forearm every two or three days with freshly prepared PPD. Readings were made at 48 hours and recorded as the average diameter of induration. The criterion for a positive reaction was induration over 5 mm. in average diameter.

Saul Starr, M.D., and Sumner Berkovich, M.D.; *The New England Journal of Medicine*, February 20, 1964.

Depressed Reactions

Measles unmodified by gamma globulin was present in 14 of the 22 children with tuberculosis and measles. Seven were admitted to the hospital with measles, and measles developed in 7 during the hospital stay. Twelve of 13 children tested between the fifth and ninth day after the onset of rash showed negative reactions to tuberculin. From the tenth through the fifteenth day only 2 tuberculin tests of 8 were negative, and from the sixteenth through the twentieth none of 4 readings was negative. The average length of time before the tuberculin test turned positive was 18 days. One reaction was negative 42 days after the appearance of the measles rash.

In the 8 tuberculous children in the hospital who were exposed to measles and contracted gamma-globulin-modified measles, the tuberculin reaction became negative 12 to 22 days before the appearance of rash, positive readings developed. The average interval before the tuberculin test turned positive was 17 days.

Among the children in Group 1, 6 of 14 with no exposure to regular measles were given live-virus vaccine and contracted definite vaccine measles. These children showed variable depression of the tuberculin test, but in most the change was of shorter duration and of lesser degree than in natural measles or gamma-globulin-modified measles.

In addition, 9 of the 10 children in Group 2 were exposed to wild measles and given live vaccine with gamma globulin separately. All but 1 showed depression tuberculin tests. In these children the combined effect of vaccine measles and incubating measles on the tuberculin test cannot be ruled out.

No Increased PPD Sensitivity

At no time, in any of the children studied, was a distinctly increased tuberculin sensitivity found in the incubation period. The tuberculin reaction was diminished in at least half of the readings in the incubation period of gamma-globulin-modified measles.

There was little difference in the tuberculin-test changes with regular and gamma-globulin-modified measles. The uniform depression of the tuberculin reaction in the first four days with rash and the appearance of a few positive skin tests in the next five days was confirmed. In both groups the interval during which the more dilute tuberculin tests were negative or depressed averaged about 17 days.

Since the depressed reaction to PPD during measles returned to its previous levels in all but 2 cases, we believe that desensitization from repeated testing was not a major factor.

Of the diseases that depress the tuberculin reaction, measles does so more uniformly and more strongly than any other. Any explanation of this effect must include the action of measles virus in the incubation period and for a period of weeks after full recovery. Fever and toxicity are obviously not the cause of the change in sensitivity. Since the tuberculin sensitivity may be depressed even when there is no rash, the exanthem of measles is not the critical factor.

The only children given measles vaccine who showed depression of tuberculin sensitivity were those in whom vaccines measles with evidence of increased antibody titer developed. Gamma globulin alone caused no such change.

Possible Explanation

It has been reported that early in the incubation period of measles lymphoid tissue throughout the body may be hyperplastic, and multinucleated giant cells are found in lymph nodes, tonsils, and adenoids, spleen and appendix. These cells are seen as early as five days after exposure to infection and appear to arise from lymphocytes. Since the measles virus produces such changes in lymphoid tissue and since the lymphocyte seems to be the cell involved in delayed sensitivity, one possible interference with tuberculin sensitivity may be a direct action of the virus on this function of the lymphocyte.

Another factor that must be considered is that the measles virus may cause an increased production of an anti-inflammatory steroid, which would then cause a depressed tuberculin reaction. This possibility requires attention because of the striking coincidence that measles can cause remission of nephrosis, can cause detrimental effects on the course of tuberculosis, and can depress tuberculin sensitivity. Furthermore, measles rarely causes asthmatic symptoms to flare up in children with recurrent asthma.

The relation of the changes in tuberculin allergy during measles to the possible deleterious effect of measles on the course of tuberculosis is only conjecture. Since vaccine measles in our cases depressed the tuberculin reaction, vaccine measles may also have deleterious effects in certain undetected and untreated cases of childhood tuberculosis.

PULSE
of the ILLINOIS STATE MEDICAL SOCIETY

A Service of the Public Relations Division *October, 1964*

Medical Profession Advertises Care for Aged

Credit County Societies as Sponsors of Campaign

ISMS this month placed advertisements in 228 weekly and 63 daily newspapers throughout Illinois to bring to millions of state residents the true picture of available health programs for elderly persons unable to pay for their medical care.

The action—by mandate of the board of trustees—was taken with financial assistance from the AMA in concert with a nationwide campaign designed for implementation at the local level.

The ads placed by ISMS bore the names of its county medical societies as sponsors in each of their respective major newspapers.

The messages stressed the positive approach to medical care for the indigent aged—especially through Kerr-Mills—rather than recite the evils of medicare. Said Dr. Edward A. Piszczek, ISMS president:

"It is felt that if we indoctrinate the public on the finer points of current medical assistance programs, such as Kerr-Mills, there will be less confusion and demand for medicare."

The theme of the education campaign was "Health Opportunity Programs for the Elderly." Dr. Piszczek said physicians may advise patients who have questions about the health opportunities presented in the ads to contact ISMS headquarters, 360 N. Michigan Ave., Chicago, Ill.

The advertisements were carried by the more than 290 Illinois newspapers during the week of Oct. 11-18. However, ISMS also has been augmenting the campaign throughout the month with promotional news releases, educational materials for radio and television, pamphlets and even prepared speeches for group meetings.

By these means, all media are being utilized to call attention to the success of the Kerr-Mills plan in Illinois and to encourage the elderly to explore its benefits.

Initiative of Carrollton Physician Leads to National Rebuff of Attack on M.D.'s

The medical profession's leadership in providing health care programs for the elderly was clearly spelled out for millions of viewers who watch the nationally telecast Today Show on NBC—thanks to individual physicians who felt need "to set the record straight."

It was Dr. Paul Dailey of Carrollton who first alerted staff members at ISMS headquarters in Chicago that an attack of inaccurate statements against the medical profession was being made in a discussion on medicare between the network's Sandor Vanocur and Sen. Clinton Anderson (D-N.M.).

Dr. Dailey's call set the wheels in motion. The AMA was informed of the details he provided and subsequently began receiving calls from many other physicians from across the country.

Dr. Dailey reinforced his objection to the Vanocur-Anderson interview with the following telegram to NBC in New York:

"Vanocur Anderson interview September 17 biased, one-sided, questions slanted. Impression promoted re medical care aged citizens neglected at present time. Vanocur failed to shed light on present good medical care for aged indigents via Kerr-Mills, other state local programs and privately financed and pension insurance programs. Resent Vanocur's implied agreement with Anderson that we physicians are not properly taking care of elderly people. Suggest you permit equal time for spokesman to set record straight."

One week later, Dr. Edward R. Annis, AMA immediate past president, appeared on the "Today Show" and ISMS headquarters was "swamped" with calls from citizens who wanted to know more about Kerr-Mills.

M.D.'s, Hospital Chiefs Convene on Cost of Care



Pleased to get together at deliberations on "The Cost of Hospital Care" are Joliet's Paul W. Kempe, left, president of the Illinois Hospital Association, and Dr. Edward A. Piszczek of Chicago, president of the Illinois State Medical Society. The occasion was the sixth annual conference jointly sponsored by their two organizations.

COUNTY CAPSULES

★ ★ ★

KANE COUNTY Medical Society President Dr. J. Donald Milligan, specialist in internal medicine, has retired after 43 years of practice in Elgin. Kane County Northern Branch will hear an address by Dr. Morten B. Andelman of Lincolnwood at a noon luncheon Thursday, October 22, at St. Joseph Hospital in Elgin.

★ ★ ★

LAKE COUNTY Medical Society is operating the Jacob Blumberg Memorial Blood Bank as a nonprofit service, enabling members who donate a pint of blood every two or three years to obtain blood free for members of their family whenever needed. Those interested in joining should write to the Jacob Blumberg Memorial Blood Bank, 1350 N. Sheridan Rd., Waukegan, Ill.

★ ★ ★

LIVINGSTON COUNTY Medical Society will hear Dr. Walter J. Reich of Chicago discuss "Diagnosis and Management of Irregular Vaginal Bleeding" at a dinner-meeting 6:30 p.m. Wednesday evening, October 21, at the Palamar Club in Pontiac. Dr. Reich is professor of gynecology at Cook County Graduate School and assistant professor of gynecology and obstetrics at Chicago Medical School.

★ ★ ★

MACON COUNTY'S Dr. I. H. Neece, Decatur urologist and past president of the Illinois State Medical Society (1948), has retired after 45 years of practice. Decatur's first superintendent of health, he was honored at a recent reception by the Macon County Medical Society.

ISMS Beams Like Proud Dad at Inaugural Meeting of Inter-Professional Association



Leaders of the Illinois State Medical Society—which was instrumental in inspiring and initiating the Illinois Association of Professions—listen attentively to Hugh W. Brenneman as he addresses a capacity audience at the IAP's first annual meeting. Brenneman, executive secretary of both the Michigan State Medical Society and the Michigan Association of Professions, was guest speaker at the IAP's inaugural general assembly held recently in Chicago's Ambassador West Hotel. Seated, from left, are Waukegan physician Dr. George B. Callahan, IAP president; Dr. Edward A. Piszczek, ISMS president; and Dr. Jacob E. Reisch of Springfield, ISMS secretary-treasurer. IAP—whose offices are housed at ISMS headquarters, 360 N. Michigan Ave., Chicago—represents the professions of medicine, law, engineering, architecture, dentistry, pharmacy and veterinary medicine.

ISMS deservedly postured like a cigar-passing pappa last month when the Illinois Association of Professions drew a capacity attendance for its first annual meeting in Chicago's Ambassador West Hotel.

The state medical society claims the right to parental pride for its instrumental role in inspiring and initiating the birth of IAP—one of only four such organizations in the country.

Waukegan physician Dr. George B. Callahan is IAP president. Robert L. Richards, ISMS executive administrator, is its executive director. Offices of the new organization—representing the professions of medicine, law, dentistry, pharmacy, veterinary medicine, engineering and architecture—are housed in ISMS headquarters at 360 N. Michigan Ave., Chicago.

In the words of Hugh W. Brenneman, who delivered one of the major addresses at the IAP's inaugural general assembly, the medical profession early recognized the "need to provide the organizational machinery by which several professions can utilize their distinct talents for the good of society."

Brenneman, executive secretary for both the Michigan State Medical Society and the Michigan Association of Professions, also predicted the inevitable unity of American professionals into a national association.

In his remarks before the assemblage, Dr. Edward A. Piszczek, ISMS president, declared:

"The Illinois State Medical Society is honored to have led the interest in the formation of the Illinois Association of Professions—organized for the same honorable principles which our forefathers organized our parent society."

Dr. Kowalski Named 'Outstanding Sportsman'

Princeton's Dr. Julius M. Kowalski has been cited as an "outstanding sportsman" in a nationwide competition conducted by the Winchester-Western Division of Olin Mathieson Corporation.

Journal Study Paints Profile of Illinois Physician

Public Gets Glimpse of Doctor's Work Load

Illinois citizens may have a greater appreciation for the heavy work load of their physicians—thanks to broad coverage given by the state's press to results of a recent survey.

The study—designed to yield a profile of the average physician—was made from a poll of the Illinois State Medical Society's 10,000 members. The project was conducted under the auspices of the Illinois Medical Journal, official publication of ISMS.

The public learned that the average physician treats an average of 118 patients a week—including 91 in his office, 23 in the hospital and four at home.

The survey also shows that the average Illinois physician attends three out-of-town professional meetings annually. In addition, at least one out of every two doctors has lectured or had a scientific paper published within the past five years.

Other facts yielded by the study:

More than 90 per cent of Illinois physicians are engaged in private practice. At least 64 per cent have their own offices, while 21 per cent work in partnership with a colleague. One-third of ISMS members are general practitioners; the remaining two-thirds are medical specialists.

Heading the list of medical specialties is internal medicine, at 12.1 per cent. It is followed by general surgery, 8.5 per cent; obstetrics-gynecology, 5.5 per cent; pediatrics, 5.4 per cent; psychiatry, 4.6 per cent; opthalmology, 3.5 per cent; radiology-roentgenology, 3.4 per cent; orthopedic surgery, 2.6 per cent; and anesthesiology, 2.5 per cent. Some 25 other medical specialties practiced each comprise two per cent or less of all Illinois physicians.

Based on these survey findings, "Dr. SIMS" was introduced to the public as the new corporate symbol of the Illinois State Medical Society.

Announce Radio-TV Awards Program

Awards for "excellence in representing the medical profession of Illinois through radio and television presentations in 1964" will be made by the ISMS Public Relations Committee at a special dinner early next year.

"All 53 radio and 18 television stations throughout the state are eligible," PR Committee Chairman Dr. Leo P. A. Sweeney announced.

Judging, he said, would be based on the public service—as well as the public relations—value of the programs presented.

Unusual Alliance of Maywood's Joslyn Family of M.D.'s Told by Magazine



Three Joslyns help staff the 38-year-old Joslyn Clinic in Maywood, Ill. The father, Dr. Arthur E. Joslyn, 83, right, founded the clinic with his late brother. Dr. Arthur's elder son, Everett, center, a G P. like his father, is medical director. The younger son, Allen, left, is the group's specialist in occupational medicine. The unusual association of the three physicians in a family was reported in a recent issue of "Medical Economics," a national publication. The three men agree that professional relations between fathers and sons are easier if they're in a large group, the article related. The senior Joslyn was quoted: "It would be disastrous if I tried to direct policy."

'Quad Film' Available to Professional Groups

"Modern Management of Multiple Births"—a new and historic teaching film which has been hailed as a standard for any physician faced with a multiple delivery—is now available without charge to professional groups.

The film was produced by the ISMS Education and Scientific Foundation through a grant from the Lederle Laboratories Division of American Cyanamid Company. It reviews the birth of identical quadruplets with scenes of actual delivery—probably the only film record of such an event.

Receiving unqualified plaudits when premiered at the recent AMA annual convention in San Francisco, the film has also been screened at the annual convention of the International College of Surgeons in Chicago and the Sixth District meeting of the American College of OB-GYN in Winnepeg, Canada.

Organizations wishing to show the 16 mm sound and color 20-minute film should write to: Education and Scientific Foundation, Illinois State Medical Society, 360 N. Michigan Ave., Chicago, Ill.

AUXILIARY NEWS

EDITOR
Mrs. Oliver Veneklasen
ASS'T EDITOR
Mrs. Theodore Proud

Urge Auxiliary Step-Up Aid to Medically Needy Through Worldwide IHA

A call for concerted action and support of the International Health Activities program has been sounded by Mrs. Thomas W. Carter, IHA state chairman.

IHA is the Auxiliary's worldwide program of service. Already the response is "tremendous," according to Mrs. Carter. Auxiliary members collect and send—through agency outlets—medicines and supplies for overseas shipment to dedicated physicians throughout the free world. Explained Mrs. Carter:

"We gather, as it were, baskets full of 'left-overs' to be sent wherever the need is greatest."

The IHA state chairman provided the following verse:

They come, as rain slides from leaf to leaf of the teak, the banyan, the kapok, the bamboo.
They come, frail from years of poor diet.
They come, with the milky eyes of childhood trachoma.
They come, with the deep cough that means an early death.
They come, invited by physicians, who learn, then teach; and . . .
They come, as physicians, for myth-bursting.
They come, because dedication is a physician anywhere.
They come, with healing syringes, not the sticky business of voodoo or of acupuncture.

"Yes," concluded Mrs. Carter, "they come because you've sent left-overs: drug samples, used medical books, bandages, medical and surgical supplies . . . in a dozen directions."

Launches 3-Pronged Drive

Auxiliary Aims to Double Ranks

The Woman's Auxiliary has launched a three-pronged campaign to double its membership, it was announced by Mrs. John W. Koenig, membership and organization chairman.

Her committee has outlined the following goals:

1. To increase and strengthen membership in existing auxiliaries.
2. To organize new auxiliaries where county medical societies exist.
3. To enroll members-at-large in state and national auxiliaries.

"A friendly personal invitation still remains the most effective method of obtaining new members," said Mrs. Koenig. "Ours is a unique organization with unique qualifications for membership. Each physician's wife should be approached as an individual with a special appeal to her known interests."

It was pointed out that membership declares to outsiders that the physician's wife is proud to be associated with her husband's professional group.

Another way to attract and retain strong membership, according to Mrs. Koenig, is to provide stimulating and informative programs. She said:

"The ability to transmit to others the aims of our organization is vital for the Auxiliary's growth. Offering well-planned meetings will also help to retain the interest of the entire membership.

Mrs. Koenig said it is the responsibility of every member to help double the Auxiliary's membership. She quoted from the immortal lines of Edward Everett Hale:

"I am only one, but I am one. I can't do everything, but I can do something. And what I can do, that I ought to do. And what I ought to do, by the grace of God, I shall do."

HELP WANTED—FEMALE

To fill and complete a Scrapbook of Press Clippings for our state president, Mrs. Willard Scrivner. This record is to be presented to her at the tenure of her office in May 1965 and is to consist of press releases of activities, invitations, photos from each County in the State of Illinois. All answers to this ad may be mailed to Mrs. Helen Knaus, 22 Country Club Acres, Belleville, Ill.

Mental Health Program Seen as County Challenge

County woman's auxiliaries are being urged to involve their members in programs to meet the mental health challenge.

The state mental health program, according to chairman Mrs. August Martinucci, operates in three main categories: suicide prevention, volunteer services and education and promotion.

Mrs. Martinucci said that suicide prevention has become a major effort in the Auxiliary program, while volunteer services are being maintained by members who need the assistance of more dedicated workers.

As for the education and promotion of mental health, reading and study material is available for both adults and teenagers.

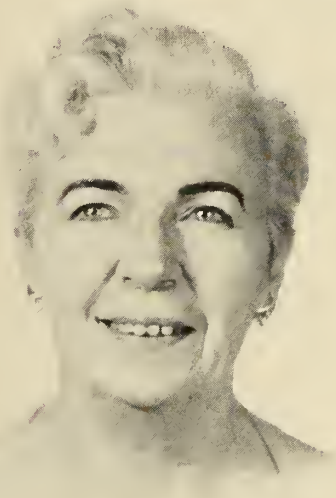
For adults, write to Mental Health Center, 104 East 25th Street, New York 10, N.Y.; Metropolitan Life Insurance Co., 1 Madison Ave., New York 10, N.Y.; or the American Psychiatric Association, 1700 18th Street, N.W., Washington, D.C.

For high school students, the pamphlet "Milestones to Maturity" is available from the Louisiana Association for Mental Health, 1528 Jackson Ave., New Orleans, La. This pamphlet, according to Mrs. Martinucci, is effective in schools, family life classes, guidance groups, churches and family service clinics.

The state chairman suggested that county auxiliaries might plan mental health programs in conjunction with scheduled committee meetings on safety, health careers or legislation.

NEWS and ANNOUNCEMENTS

Appointments



Dr. Dorothy H. Welker

Dorothy H. Welker, M.D., Chairman of the Department of Pediatrics at Grant Hospital, Chicago, and Director of the Dr. Egon W. Fischmann Premature Station, has been appointed Director of Medical Education at Grant Hospital in Chicago. In her new position, Dr. Welker will be responsible for the educational program for all interns and residents at the hospital.

Dr. Welker will be responsible for the recruitment and appointment of interns, setting up schedules of lectures, conferences and journal clubs, and integrating the program for the house staff with the attending physicians, nursing staff, and patients. She will also arrange for obtaining outside lecturers and will supervise the organization and training of teams in special techniques such as exchange transfusions, resuscitation of the newborn and anticonvulsive therapy.

In addition to her duties at Grant Hospital, Dr. Welker is an associate professor of pediatrics at the University of Illinois School of Medicine. She has also served as an associate in pediatrics for 14 years at Cook County Children's Hospital and as a clinical instructor in pediatrics for 10 years at the Stritch School of Medicine.

Dr. A. R. Surrey has been promoted to the newly-created position of director, new products, of the Sterling-Winthrop Research Institute, it was announced here by Dr. C. M. Suter, Institute director. The new post has coequal status with the Institute's other divisional directors.

An internationally-noted chemist, Dr. Surrey has also been appointed the Institute's first senior research Fellow in chemistry. In this capacity, he will continue research in medicinal chemistry, the work that in the past 20 years has resulted in a number of drug discoveries which have won him worldwide scientific recognition. Perhaps the most significant was synthesis of the antimalarial drug Aralen (chloroquine) as a substitute for quinine, which was no longer available to the Allies after the initial Japanese military successes in World War II.

As director, new products, he will be responsible for initiating and evaluating new product development, as well as coordinating research efforts with laboratories recently opened in Dijon, France, by Sterling Drug, the Institute's parent company.

Thomas P. Carney, Ph.D., a leader in modern medical and related research, joined G. D. Searle & Co., Chicago medical research and prescription drug manufacturing organization, September 14, as vice president-research and development, John G. Searle, president, announced today.

Dr. Carney had been with Eli Lilly and Company, Indianapolis medical and chemical research and manufacturing organization, for twenty years. He started with Lilly as a research

chemist and for the last nine years has been vice president for research, development and control, and a member of the Lilly board of directors and six-man executive committee.

At Searle, he will be associated with Albert L. Raymond, Ph.D., senior vice president, research and development, and Daniel C. Searle, executive vice president, in carrying forward Searle's expanding scientific work in medicinals and also in collateral research work and acquisition activity leading toward Searle entrance into the fields of products for argriculture, forestry and animal husbandry. Dr. Carney is credited with moving the Lilly organization into product areas that resulted in the formation of Elanco Products Company, one of the rapidly growing units of Lilly.

Dr. William P. Blackmore, assistant director, clinical research division of the Sterling-Winthrop Research Institute, has been promoted to the position of associate director of the division. In his new capacity, Dr. Blackmore will assume additional responsibilities in the clinical research division which is headed by Dr. Joseph G. Bird. A prominent pharmacologist, Dr. Blackmore was associate professor of pharmacology at Southwestern Medical School of the University of Texas before coming to the Institute.

Dr. John F. Sheehan, dean of Loyola University's Stritch School of Medicine, has been appointed vice president for the new Loyola University Medical Center near Maywood, Illinois. Dr. Sheehan, a Loyola faculty member for 27 years and chairman of the pathology department from 1940 to 1962, has served as dean of the Jesuit institution's Medical School since 1950. He will continue as dean and also be responsible for the teaching, research, and patient care activities in the new Loyola University Medical Center, said the Very Rev. James F. Maguire, S.J., Loyola's president.

Dr. David P. Earle has been named the Irving S. Cutter Professor and Chairman of the Department of Medicine of the Northwestern University Medical School. His appointment will become effective January 1, 1965.

Dr. Earle, a professor of medicine and clinical investigator at Northwestern for the past ten years, will succeed Dr. Arthur R. Colwell Sr., who has been chairman of the department since 1950. Dr. Earle has been the recipient of grants for a number of research projects at Northwestern. His major interest has been the study of kidney diseases.

Essay Contests

Entries are now being accepted for the fifth annual Graduate Rehabilitation Literary Awards competition, sponsored by the National Rehabilitation Association.

Cash prizes of $300, $125, and $75 will be awarded to first, second, and third place winners, respectively; in addition, award-winning entries will carry high priority for publication in NRA's *Journal of Rehabilitation.*

All persons preparing at the graduate level in colleges or universities to work professionally with handicapped people are eligible to submit papers. Contributors—students following graduate courses in medicine, nursing, rehabilitation counseling, physical therapy, psychology, social work, speech therapy, and related fields—may write on any aspect of rehabilitation; maximum essay length is 3000 words. All entries must be in the offices of the National Rehabilitation Association by March 1, 1965, to be eligible for the 1965 awards.

Details are available from Doris Margolis, NRA editor.

New Literature

Now it will be easier to get technical and medical books published by Springer-Verlag, Europe's largest publishers of scientific books and periodicals. The West German and Austrian publishers have established a new independent American subsidiary which will make available over 3,000 books and periodicals in the field of physics, chemistry, biology, medicine, mathematics and engineering.

The American subsidiary, Springer-Verlag New York Inc., will eliminate import problems

(Continued on page 490)

Meeting Memos
for October-November



October 21—The first meeting for the Society of Medical History will be held at the Quadrangle Club on the University of Chicago Campus. Guest speaker Dr. J. B. de C. M. Saunders, Chancellor, University of California San Francisco Medical Center, will commemorate the 400th anniversary of the death of Andreas Vesalius. Reservations should be made with Dr. Joseph H. Kiefer, 840 South Wood Street, Chicago, Illinois 60612.

October 25—The Annual Scientific Meeting of the American College of Nutrition will be held in the Americana Hotel in New York City beginning at 9 a.m. For further information contact Dr. Robert A. Peterman, Secretary-Treasurer, 3 Craig Court, Totowa Boro, New Jersey 07512.

October 26-29—The 17th Annual Postgraduate Seminar of the Illinois Academy of General Practice will be held in the Sherman House Hotel, Chicago.

November 5-7—The Second Annual Congress on Mental Illness and Health will be held at the Palmer House Hotel. Sponsored by the AMA Council on Mental Health, the Congress will carry the theme, "Community Mental Health Services and Resources—Mobilization and Orientation." For registration information contact Dr. Walter Wolman, Director, Department of Mental Health, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610.

November 7-8—The LaSalle Hotel in Chicago will host the Fifteenth National Conference on Disaster Medical Care. Sponsored by the AMA's Committee on Distaster Medical Care of the Council on National Security, the Conference will cover such subjects as Care of the Multiple Injury Patient; Transportation of the Injured; Role of the Nurse, Pharmacist and the Hospital in Disaster; Planning for Disaster; and Workshops for Doctors, Hospitals and Community Planners. A $10 Registration Fee will be payable at the time of registration. For further information write the American Medical Association Council on National Security, Department of Governmental Medical Services, Division of Environmental and Medical Services, 535 North Dearborn Street, Chicago, Illinois 60610.

November 10—"The History of Medical Journalism" will be the subject of the International Surgeons lecture at their Hall of Fame, 1524 Lake Shore Drive, Chicago, at 8:00 p.m. Delivering the lecture will be Dr. Morris Fishbein, Editor, Medical World News.

November 11—Mortimer Ostow, M.D., New York Psychoanalyst, and Samuel Kraines, M.D., will discuss "Stress and Psychic Function" at the third Stress and Adaptation lecture series presented by Forest Hospital, 555 Wilson Lane, Des Plaines, Illinois.

November 13-16—The National Society for Crippled Children and Adults (Easter Seal Society) will hold its Annual Convention at the Statler-Hilton Hotel in Detroit, Michigan. Highlight of the session November 15 will be the first national Careers Conference on Youth, designed to help relieve the critical shortage of professional rehabilitation personnel by interesting high school and university students in rehabilitation as their life's work. Application blanks and information for student attendance may be obtained from the National Society for Crippled Children and Adults, 2023 West Ogden Avenue, Chicago, Illinois.

November 29—"The Medical Aspects of Sports" will be the topic of the American Medical Association's Sixth National Conference on the Medical Aspects of Sports to be held in conjunction with the AMA Clinical Convention at the Deauville Hotel in Miami Beach, Florida. Lectures, demonstrations and discussions will cover such subjects as: The Shoulder in Sports; Environmental Considerations; Sports for the Teenager; and Conditioning and the Competitive Swimmer.

NEWS and ANNOUNCEMENTS

(Continued from page 488)

of rate of exchange, foreign mailing and customs, which, until now, have been related to acquiring Springer-Verlag Books.

A newsletter summarizing new information on diabetes research, detection, and therapy, has been launched by The Upjohn Company to help physicians keep abreast of developments in one of the most volatile areas of medical practice.

The first issue, appearing in September, features an original article by Dr. Glen W. McDonald, Chief of the U.S. Public Health Service's Diabetes and Arthritis Program, who states that there are more than 4 million diabetics in the nation today, at least half of them cases that are undetected and untreated. This is one million more than the previous official estimate.

The newsletter, a professional service for physicians, also carries brief abstracts of world medical literature on various aspects of diabetes. It will be edited and distributed several times a year.

Beginning in the spring of 1965, original volumes by leading American scientists will be published here, to provide for the specific needs of this country's medical experts, teachers, engineers, scientists and technicians.

Among the first titles to be published under the imprint of Springer-Verlag New York, Inc. are *Atlas and Glossary of Primary Structures* by F. J. Pettijohn and P. E. Potter, *Coding Theorems of Information Theory* by J. Wolfowitz and *Structure of Matter* by W. Finkelnburg. Springer-Verlag New York will also take over distribution of *Residue Reviews* for this country and Canada.

The American subsidiary company is under the direction of Gunter Holtz, who is Executive Vice-President. Mr. Holtz was in charge of sales, promotion and development of overseas markets for the European parent companies before his

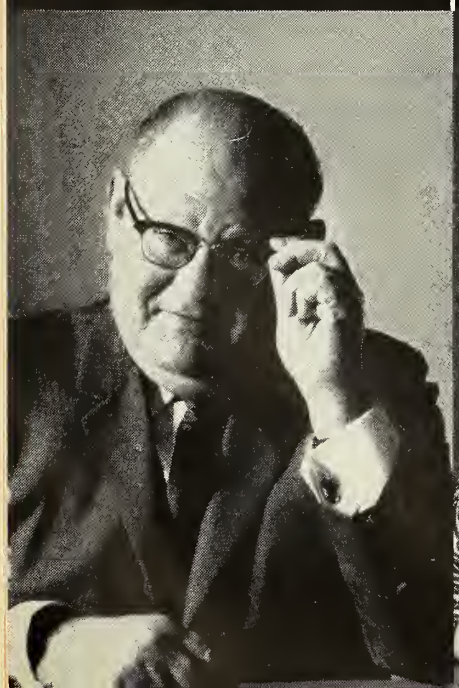
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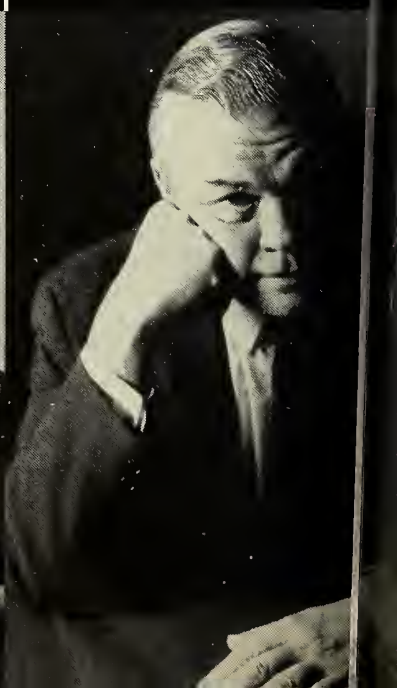
...fasting serum levels of insulin are usually normal, postprandial levels excessive[1-3]

...insulin acts in adipose tissue via hexose monophosphate shunt, principal path of glucose conversion to storage fat[1,4]

...excessive endogenous insulin acts to stimulate lipogenesis and weight gain[1,3,4]







appointment as head of the American firm.

Those interested in Springer-Verlag catalogs or literature may write to the publisher at 175 Fifth Avenue, New York, N.Y. 10010.

Scientific Films

A new 35mm color stripfilm and a 12 inch, 33⅓ speed, recorded narrative on the techniques and application of Intermittent Peritoneal Dialysis is being offered by Cutter Laboratories, Berkeley, California. The film graphically illustrates each step of the procedure and the narrative is an informative description of it. The stripfilm is designed for use by doctors, nurses, staff and postgraduates.

Equipment required to use the film includes a 35mm stripfilm projector, screen and 33⅓ speed standard record player. These are available at local libraries or through audio-visual rental agencies.

The presentation is postage paid both ways and is offered on a loan basis. Requests should be made in writing to the Supervisor, Audio-Visual Aids, Cutter Laboratories, Fourth and Parker Streets, Berkeley, California.

PG Courses

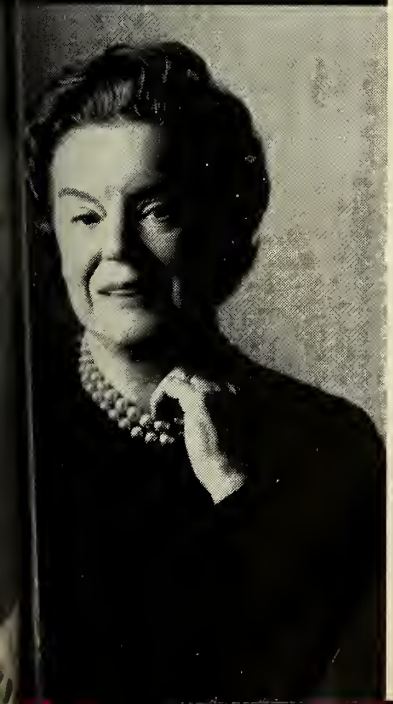
"Fundamental Concepts of Gastroenterology" is the title of a postgraduate course of the American College of Surgeons to be held November 16-20, 1964 at the University of Michigan Health Center, Ann Arbor, Michigan. Tuition fee for ACS members is $60; for nonmembers, $100. All registration forms and requests for information are to be sent to Edward J. Rostenow, Jr., M.D., Executive Director, American College of Surgeon, 4200 Pine Street, Philadelphia, Pa., 19104.

Awards

A University of Chicago authority on cell research was one of three United States scientists awarded honorary doctor's degrees at ceremo-

diabetic

DBI lowers high blood sugars without promoting fat synthesis, encourages gradual weight loss[2-9]



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DBI promotes glucose utilization via the physiologic Embden-Meyerhof pathway... reduces high blood sugars, lowers toward normal elevated blood insulin levels, encourages gradual weight reduction. For the ketoacidosis-prone diabetic, however, insulin is still the essential hypoglycemic agent.

side effects: Gastrointestinal, occurring more often at higher dosage levels, abate promptly upon dosage reduction or temporary withdrawal. **precautions:** Occasionally an insulin-dependent patient will show "starvation" ketosis (acetonuria without hyperglycemia) which must be differentiated from "insulin-lack" ketosis which is accompanied by acidosis, and treated accordingly. Lactic acidosis has been reported in non-diabetics and diabetics treated with insulin, with diet, and with DBI. Question has arisen regarding possible contribution of DBI to lactic acidosis in patients with renal impairment and azotemia and also those with severe hypotension secondary to myocardial or bowel infarction. Periodic B.U.N. determinations should be made when DBI is administered in the presence of chronic renal disease. DBI should not be used when there is significant azotemia. Any cardiovascular lesion that could result in severe or sustained hypotension, which may itself lead to development of lactic acidosis, should be considered cause for immediate discontinuation of DBI at least until normal blood pressure has been restored and is maintained without vasopressors. Should lactic acidosis occur from any cause, vigorous attempts should be made to correct circulatory collapse, tissue hypoxia, and pH. **contraindications:** Severe hepatic disease, renal disease with uremia, cardiovascular collapse. Not recommended without insulin in acute complications of diabetes (metabolic acidosis, coma, severe infections, gangrene, surgery). **pregnancy warning:** *During pregnancy, until safety is proved, use of DBI, like other oral hypoglycemic drugs, is to be avoided.* Consult product brochure for full information.

1. Gordon, E.S.: Metabolism 11:819, 1962. **2.** Grodsky, G.M. et al.: Metabolism 12:278, 1963. **3.** Weller, C. et al.: Scientific Exhibit, A.M.A., June 1962. **4.** Sadow, H.S.: Metabolism 12:333, 1963. **5.** Faludi, G.: J. Am. Med. Women's Assoc. 18:722, 1963. **6.** Faludi, G.: Geriatrics 18:452, 1963. **7.** Williams, R.H.: Textbook of Endocrinology, Ed. 3, Saunders, Phila., 1962, p. 610. **8.** Weller, C. and Linder, M.: Am. Therap. Soc., June 1963. **9.** Moss, J.M. et al.: Med. Times, July 1964.

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nies marking the 600th anniversary of the Jagellonian University of Cracow, in Poland.

He is Dr. William Bloom, Charles H. Swift Distinguished Service Professor in the Departments of Anatomy and Biophysics of The University of Chicago.

Honored with him were Professor Linus Pauling, of the California Institute of Technology, who holds both a Nobel Prize in chemistry and a Nobel Peace Prize; and Dr. Paul Dudley White, eminent cardiologist and an emeritus member of the Harvard University faculty.

In addition to the three Americans, 28 other scientists and scholars from England and countries of eastern and western Europe received honorary degrees at ceremonies in Cracow on May 9th. The ceremonies were part of the yearlong celebration of the founding of the Polish university in 1364.

Dr. Bloom was honored for his research on cells of connective tissue, including blood and bone, and their interrelationships, and also for his use of tissue cultures in approaching these problems.

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Crippled Children's Clinics for October-November

October 20	Belleville—St. Elizabeth's Hospital
October 21	Chicago Heights General—St. James Hospital
October 22	Mt. Vernon—Masonic Temple
October 27	Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital
October 27	Peoria General—Children's Hospital
October 28	Springfield Cerebral Palsy (P.M.)—Memorial Hospital
October 28	Aurora—Copley Memorial Hospital
November 3	Pittsfield—Illini Community Hospital
November 3	Danville—Lake View Hospital
November 4	Fairfield—Fairfield Memorial Hospital
November 4	Hinsdale—Hinsdale Sanitarium
November 5	Sterling—Community General Hospital
November 5	Peoria Cerebral Palsy—Roosevelt School
November 6	Chicago Heights Cardiac—St. James Hospital
November 10	East St. Louis—Christian Welfare Hospital
November 10	Peoria General—Children's Hospital
November 11	Champaign-Urbana—McKinley Hospital
November 11	Joliet—Silver Cross Hospital
November 12	Springfield General—St. John's Hospital
November 12	Macomb—St. Francis Hospital
November 17	Alton General—Alton Memorial Hospital
November 18	Centralia—St. Mary's Hospital
November 18	Springfield Cerebral Palsy (P.M.)—Memorial Hospital
November 18	Evergreen Park—Little Company of Mary Hospital
November 19	DuQuoin—Marshall-Browning Hospital
November 19	Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital
November 19	Rockford—Swedish-American Hospital
November 19	Decatur—Decatur & Macon Co. Hospital
November 19	Elmhurst Cardiac—Memorial Hospital of DuPage County

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Dr. John L. Reichert: A Personal Memorium



It seemed sadly appropriate that the announcement of Dr. John L. Reichert's passing should be made at the Illinois State Medical Society's Board of Trustees meeting on Saturday, September 19, only a few moments after he died. As a member of that official body from 1950 through 1964, he had made it his launching site for numberless crusades to improve the health and well-being of children.

Only last January, as chairman of the Child Health Committee, he initiated a permanent education campaign to prevent children from starting to smoke and to influence teen-agers to discontinue smoking.

As a member of the Board of Education from 1957 to 1961, Dr. Reichert initiated programs that have become permanent guardians for the well-being of Chicago children. Among them is the sale of snacks in public schools instead of candy; a policy of studying school architecture from the standpoint of the child's well-being; the polio vaccine program; and a program of warning parents whenever their children were exposed to contagious disease.

Not only the children of Illinois, but of the nation, have benefitted from his selfless and energetic efforts in their behalf. As chairman

(Continued on page 494)



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STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Act of October 23, 1962: Section 4369, Title 39, United States Code)

1 Date of filing: September 30, 1964.

2. Title of publication: Illinois Medical Journal.

3. Frequency of issue: Monthly.

4. Location of known office of publication: 360 North Michigan Avenue, Chicago, Illinois 60601.

5. Location of the headquarters or general business offices of the publishers (Not printers): 360 North Michigan Avenue, Chicago, Illinois 60601.

6. Names and addresses of publisher, editor, and managing editor: Publisher: A. G. Boeck, Jr., 360 North Michigan Avenue, Chicago. Editor: T. R. Van Dellen, M.D., 360 North Michigan Avenue, Chicago. Managing editor: John A. Kinney, 360 North Michigan Avenue, Chicago.

7. Owner: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stick. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.) Name: Illinois State Medical Society. Address: 360 North Michigan Avenue, Chicago.

8. Known bondholders, mortgages, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities (If there are none, so state): None.

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IN MEMORIUM—DR. REICHERT

Continued from page (493)

of a committee for the American Association of Health, Physical Education and Recreation, Dr. Reichert pioneered public school recreational practices that since have been adopted throughout the United States.

On that gray Saturday afternoon, when the Board of Trustees rose as one to pay a last, silent homage, the sense of loss became suddenly apparent. Not only the physician, but the man will be missed—the quiet, unassuming man who nonetheless spoke with the rapidity and authority of someone who knew precisely what he wanted to say; the dedicated, gentle man who loved flowers and often likened them to children whom he loved most of all; the good-natured man who never failed to smile at jibes about his occasional absences from Board meetings—absences for the most part necessitated by a busy life of service as practicing pediatrician, assistant professor of Pediatrics at Northwestern University, and member of the advisory health committees of the Illinois Public Health Department, the state Commission for Handicapped Children, and the National School for Health Education study.

The sadness and sense of loss the Board felt on that gloomy Saturday were not unmixed with quiet satisfaction, however. Only moments earlier, Dr. Reichert's recommendations on accepting ads and exhibits by cigarette manufacturers had been adopted unanimously. His last official act for our Society had been fulfilled.

For the writer, there is still another recollection of Dr. Reichert. A year ago, when our two-month-old daughter developed pneumonia, Dr. Reichert was called in.

The next evening he greeted us at the door with the warm, gloom-breaking smile that was his trademark. "You're little girl is going to be all right," he beamed.

Our only communication with him after that was returned checks which he refused to accept for his services.

To conclude adequately a tribute to Dr. John L. Reichert, one must borrow from the poet who wrote: *"What has gone away, can never be replaced; What has been left us, will never be forgotten."*



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Obituaries

Leo Amtman*, Chicago, died August 18, aged 60. A graduate of the University of Illinois College of Medicine in 1927, Doctor Amtman was senior attending physician at Columbus hospital until he retired in 1959.

Theodore A. Baumann*, Fort Myers, Florida, formerly of Winnebago County, died August 13, aged 75. He was a graduate of Northwestern University Medical School in 1914.

Isaac E. Bartlett, Wheaton, died August 10, aged 53. A graduate of Chicago Medical School in 1940, he specialized in otolaryngology. Dr. Bartlett had been active organizer of the new Central Du Page Hospital.

Earl E. Blanck*, Chicago, died August 23, aged 60. He was a graduate of University of Illinois College of Medicine in 1930 and a staff member of St. George hospital.

Warren C. Blim*, Chicago Heights, died September 2, aged 74. A graduate of University of Illinois College of Medicine in 1916, Doctor Blim had been a staff member of St. James hospital for over 50 years. He was an emeritus member of ISMS.

William F. Borchers*, Chicago, died July 14, aged 73. In 1921 he graduated from Rush Medical College and specialized in internal medicine. He was an emeritus member of ISMS.

Ralph J. Brouillet, Chicago, died August 14, aged 80. In 1904 he graduated from the Illinois Medical College.

Arthur A. Calkins*, Chadwick, died July 31, aged 86. In 1912 he was a graduate of Illinois Medical College. He was also a member of the American College of Surgeons.

Joseph A. Capps*, Winnetka, died September 17, aged 92. A graduate of Harvard Medical School in 1895, he was very active until his retirement in 1954. He was an emeritus member and a member of the Fifty Year Club of ISMS.

Ralph W. Carpenter*, Geneva, died September 10, aged 74. In 1916 he was a graduate of Rush Medical College. He was a fellow of the International College of Physicians, past president of Kane County medical society, and an emeritus member of ISMS.

Charles A. Cibelius*, Rockford, died August 24, aged 72. In 1916 he graduated from Rush Medical College. He was an emeritus member of ISMS.

David deKruif, Mount Carmel, died July 30, aged 45. A graduate of Yale University College of Medicine in 1945, he specialized in internal medicine and cardiology.

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Harlan S. Cox*, Danville, died August 23, aged 62. A graduate of Northwestern University School of Medicine in 1931, he practiced surgery until retirement in 1960. He had served as president of both Lake View Memorial and St. Elizabeth hospital staffs.

John J. Dwyer, Chicago, died September 19, aged 59. A graduate of Loyola University Medical School in 1931, he had been a staff member of Little Company of Mary hospital for 30 years.

Harry E. Freeman*, Millington, died June 10, aged 87, In 1903 he was a graduate of Northwestern University Medical School.

Glenn H. Gilbreth*, Chicago, died August 15, aged 77. He was a graduate of Loyola University School of Medicine.

Bernard Goldfield*, Chicago, died September 23, aged 72. A graduate of Loyola University Medical School in 1918, he retired in 1949.

George W. Haan, Jr., Decatur, died August 10, aged 70. He was a graduate of Northwestern University Medical School in 1918. A physician and surgeon in Decatur until 1950, he became head of the Bergstrom Air Force Base Clinic in Austin, Texas.

Roger Harmon*, Elmhurst, died August 25, aged 27. A graduate of the University of Chicago School of Medicine in 1962, he specialized in pediatrics.

Ernest Lister*, Chicago, formerly of Essen, Cermany, died August 16, aged 68. A graduate of Hamburische Universitate Medizinische Fakultat, Hamburg, in 1922, Dr. Lister practiced at Roseland Community hospital for 25 years.

John T. McCormick*, Chieago, died August 30, aged 77. A graduate of Jenner Medical College in 1916, he retired from active service in 1959.

Thomas C. McDougal*, Sarasota, Florida, formerly of Chicago, died August 19, aged 63. He was a graduate of University of Manitoba Faculty of Medicine, Winnipeg in 1927.

Daniel C. Potter, Chicago, died August 22, aged 81.

John L. Reichert*, Chicago, died September 19, aged 68. A graduate of Rush Medical College in 1920, Doctor Reichert became a nationally known pediatrician. At the time of death he was assistant professor of pediatrics at Northwestern University, associate pediatrician at Children's Memorial, senior pediatrician at Wesley Memorial and a governor of the Institute of Medicine of Chicago. For over three decades he has been a leader in protecting the health of Chicago's children.

Oscar W. Rest, Chicago, died August 14, aged 78. A graduate of Chicago College of Medicine and Surgery in 1913, he specialized in occupational medicine. He was an emeritus member and a member of the fifty year club of ISMS.

Henry D. Roach*, Anna, died August 15, aged 47. In 1950 he was a graduate of Northwestern University Medical School. He had served as physician and surgeon at Anna State and Union County hospitals.

William Sermonte, Oak Park, died August 26, aged 33. In 1957 he graduated from Northwestern University Medical School and specialized in ophthalmology. He was a resident physician at Hines V.A. hospital.

Robert L. Sullivan*, Galesburg, died August 16, aged 37. A graduate of Yale University School of Medicine in 1952, he specialized in obstetrics and gynecology.

Erich M. Uhlmann*, Chicago, originally of Cermany, died September 14, aged 63. A graduate of Christian-Albrechts-Universitat Medizinische Fakultat, Kiel, Prussia in 1923, he came to Chicago for a conference on radiology and stayed on at Michael Reese hospital for 25 years until his recent death. A renowned expert on radiation and electron treatment of cancer, he developed the linear accelerator. He was an assistant professor of radiation at Northwestern University, a member of many national and international professional societies and the author of several medical publications.

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IMJ

Illinois Medical Journal

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AS I SEE IT FROM '360'

By Robert L. Richards
Executive Administrator

COMMENTS ON THE ANNUAL REFERENCE ISSUE

Any regular reader of the Illinois Medical Journal easily recognized that there was something different about the August 1964 issue. First of all, the cover was changed, and for the most part the inside pages contained references to medical information which every physician in the State of Illinois should have readly available. Many physicians have complimented the Journal Committee and staff on the August issue, and some suggestions for improvement have already been accepted.

As I sec it, this issue will become an annual issue published in August of each year, and will be updated and improved. If there should be anything lacking which a member of the medical profession bclieves should be included we would certainly like to receive your suggestions. As Dr. Edward A. Piszczek said in the foreword: "Your interest and advice and counsel will aid us greatly to make this a useful reference guide."

For those who may be interested, extra copies of the Constitution & Bylaws and the committee listing have been made available. There are a few additional copies of the complete Journal also available, but only on special request. If you have failed to retain your August 1964 issue and require or need a copy for your desk reference let us know and we will try to replacc it for you.

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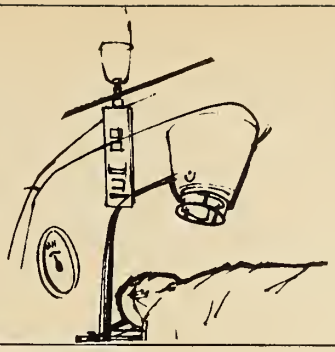


THE ULCER LIFE

In this "pop art" assemblage, artist Bob Sullivan depicts "the ulcer life" as man-in-a-box. The wall of nails closing in might well symbolize the torturous demands of a rigid, conformist society. As for the man, his disembodied psyche moves relentlessly onward with the blank, fixed stare of a man who has lost control of his own destiny. Small wonder that his gastric mechanism rebels.

NUMBER 1 IN A SERIES

MEDICAL PROGRESS



HARVEY KRAVITZ, M.D. /editor

To keep the Illinois physician abreast of the latest advances in the various medical specialties, the Illinois Medical Journal is pleased to begin the new monthly feature, "Medical Progress." Instituted as a result of requests made in a recent readership survey of IMJ, "Medical Progress" is written by a group of recognized authorities who will review the latest developments in their particular specialty. To Dr. Harvey Kravitz, for his tireless and energetic efforts in formulating this section and functioning as its editor, the entire IMJ staff extends its warmest thanks.

THEODORE R. VAN DELLEN, M.D.
EDITOR
ILLINOIS MEDICAL JOURNAL

CURRENT DEVELOPMENTS IN REGIONAL ENTERITIS

A SURVEY OF RECENT LITERATURE

PART I

Marshall Sparberg, M.D.,
and
Joseph Kirsner, M.D.
/Chicago

From the Department of Medicine, University of Chicago. This work is supported in part by the Wallach Fund for Gastrointestinal Research.

SINCE THE DESCRIPTION of regional ileitis by Crohn in 1932, the scope of granulomatous disease of the bowel has expanded, to include recognition of a similar tissue reaction in the large intestine, the vulnerability of the entire small intestine rather than only the terminal ileum, and, in some cases, the simultaneous involvement of both small and large intestine. President Eisenhower's surgery for regional enteritis has increased public interest in the disease.[1] The purpose of this paper is to review recent observations on the nature, course and treatment of "non-specific" inflammatory disease of the small intestine.

Pathogenesis

The etiology of regional enteritis remains obscure. Important possibilities appear to have been excluded, including a variety of identifiable bacterial and protozoan infections.[2] However, in view of the likelihood of an inflammatory mechanism in the pathogenesis of the disease, investigation of the possible role of

so-called L-forms of bacteria may be desirable. Actually, despite considerable study, much remains to be learned of the microflora of the gut, anaerobic as well as aerobic, its relationship to health and disease, and the possible contributory role of gram-negative bacterial endotoxins in the pathogenesis of inflammatory bowel disease. While tuberculosis and sarcoidosis may involve the small intestine, they appear to have no etiologic relationship to regional enteritis. An attempt to devise a skin test analogous to the Kveim test for sarcoidosis, by the intradermal injection of an extract of a lymph node from a patient with regional enteritis, failed;[3] possibly because of the continuing corticosteroid therapy in 4 of the 9 patients tested.

Positive Frei tests for lymphogranuloma venereum in 7 patients with regional enteritis have re-kindled interest in this viral agent.[4] However, its etiologic significance seems doubtful for several reasons: the extensive involvement of small intestine in regional enteritis differs from the circumscribed stricture typical of lymphopathia venereum; the frequency of the disease among children, not in contact with this virus; and earlier negative data from this laboratory. A viral etiology for the disease has been suggested frequently, but viruses have not been isolated from diseased intestine;[5] confirming earlier unpublished observations. The granulomatous tissue reaction has suggested the possibility of a delayed hypersensitivity response.[6] However, attempts to establish an immunologic basis for regional enteritis thus far have failed;[7] although this concept remains appealing. Administration of Esch. coli endotoxin orally and intravenously, combined with reticuloendothelial blockade, in dogs produced lymphatic hyperplasia in the terminal ileum, associated with submucosal thickening and lymph node hyperplasia;[8] but the findings do not duplicate regional enteritis. Trauma to the bowel has been implicated, on clinical circumstances.[9,10] However, in the vast majority of cases, the development of regional enteritis is unassociated with abdominal injury. Perhaps, in unusual instances, clinically latent regional enteritis is activated by trauma to the abdomen.

A slight but definite familial predisposition has become apparent,[11] but more comprehensive family and genetic studies are desirable. Regional enteritis in identical twins has been reported on several occasions.[12,13] While observed among all social groups and most races, regional enteritis appear to be slightly more prevalent among persons of Jewish origin,[14] and less common among Negroes.[15] However, such statistics always are subject to the limitation of possible differences in the uniformity of diagnostic appraisals by various observers. The frequency of inflammatory small bowel disease among children, teenagers and young adults is striking; an association that is undoubtedly significant pathogenetically, though the nature of the relationship is not evident at present.

No new evidence has appeared in support of a psychogenic or neurogenic cause of regional enteritis; though, of interest in this connection, is an apparent increase in the number of neural elements in the intestinal wall. The role of emotional stress in regional enteritis more likely seems that of a "trigger," promoting the exacerbation of symptoms rather than as an etiologic mechanism.

The number of patients with regional enteritis apparently has increased in the past 30 years. Whether or not this trend reflects greater awareness of the disease and improved diagnosis, or a true rise in incidence, as we assume, is not clear. If the latter view is valid, interesting speculation might include the possible role of agents to which people today are exposed more extensively than in the past, possibly food additives and, drugs, including antibacterial agents.

Pathology

The initial pathologic process, preceding inflammation and the deposition of fibrous tissue, appears to consist of submucosal edema and lymphangiectasia, as determined by examination of tissue proximal to ulcerogranulomatous areas.[16,17] Noteworthy in this connection has been the development of a tissue reaction resembling regional enteritis following experimental lymphatic obstruction of small bowel after the prolonged administration of silica dust;[18] these interesting experiments reported in 1950 deserve repetition. The following pathologic sequence may be envisioned, according to Amann and Bockus:[16] submucosal lymphangiectasia leading to submucosal edema

and lymphoid hypertrophy, with eventual flattening of the mucosal folds overlying the area; further edema and hypertrophy of the muscularia mucosae then causes small rents in the mucosa; aided by diminished blood flow, shaggy ulcerations develop; further penetration of the ulcers leads to fistula formation, abscesses, and to the complications of advanced regional enteritis.

A primary problem then would appear to be the cause of the lymphangiectasia; and the factors involved in producing the inflammation, endothelial proliferation and obstruction of the intestinal lymphatics observed in many cases. Contact of the mucosa of the intestinal wall with antigenic substances in the intestinal lumen, and dissemination of noxious agents in the intestinal content, via lymphatic channels have been implicated, but supporting evidence is lacking. Of possible interest in this regard is the tendency of the disease to involve small bowel immediately proximal to the ileocecal valve, and the tendency for the recurrences, after resection of diseased intestine, to develop in small bowel immediately proximal to the ileocolonic anastomosis, areas presumably in longer contact with the intestinal content than other areas of the small bowel.

Regional enteritis has been compared to ulcerative colitis, since the two diseases share many clinical features; and apparently may co-exist in the same patient.[19,20] However, the concomitance of both diseases in the same patient is rare;[21] and the associated colonic disease more often is granulomatous in nature, rather than the usual ulcerative colitis.[20-23] The two diseases actually have distinctive pathologic features. Findings typical of regional enteritis include deep, shaggy ulcerations, disposed longitudinally in relation to the mesenteric attachment of the small intestine, involvement of all layers of the bowel wall, lymphoid hyperplasia with granulomas and giant-cell systems, fistula formation, involvement of regional lymph nodes, and thickening of the mesentery.[21,22] Giant cells and granulomas may be observed in ulcerative colitis,[24] but the tissue reaction usually is confined to the mucosa and submucosa and is characterized by the focal accumulation of polymorphonuclear cells within the crypts of the colon mucosal glands; lymphangiectasis is rare, the mesentery is not thickened or adherent, and the regional lymph nodes are not enlarged. Although the terminal ileum often is involved in "ordinary" ulcerative colitis, the pathologic changes are similar to those in the colon. In chronic ulcerative colitis the findings include submucosal fibrosis, muscle hypertrophy and subserosal fibrosis.

A major feature of the tissue reaction in regional enteritis is thickening of the bowel wall and fibrosis, leading to a characteristic narrowing of the intestinal lumen, with partial or complete obstruction. The pronounced cicatrization of the small bowel is unexplained. The occurrence of metaplastic pyloric-type glands in areas of small bowel involved with regional enteritis initially was correlated with a high rate of recurrence;[25] however, more recent studies have not confirmed this association.[26]

Diagnosis

Chronic regional enteritis, in the majority of instances, is characterized clinically by the gradual onset of cramping abdominal pain, diarrhea, weight loss, anemia and fever. Acute regional enteritis may mimic acute appendicitis so closely that the diagnosis is made only at operation. Appendectomy under these circumstances is claimed to be safe;[27] however, the inflamed ileum should not be resected or biopsied, to avoid the possibility of fistula formation, and also since the full extent of the disease cannot be determined accurately under such acute circumstances. In other instances, as among children, gastrointestinal symptoms may be minimal or absent, and the systemic symptoms of fever,[28,29] tachycardia, weight loss and growth retardation[30,31] are prominent. Regional enteritis has been misdiagnosed initially as anorexia nervosa[32] and as depressive disorders.[33] Occasionally, the clinical distinction between lymphosarcoma of the small bowel and regional enteritis is difficult.[34] Adenocarcinoma and carcinoid tumors of the small bowel may simulate regional enteritis.[35-37] Inflamed bowel, adhering to pelvic organs, may suggest pelvic inflammatory disease as the primary diagnosis;[38] and adherence to the urinary bladder may cause presenting symptoms of urinary frequency and dysuria, suggesting urologic disease initially. The varied clinical manifestations of re-

gional enteritis re-emphasize the importance of considering this disease in the evaluation of obscure clinical situations, especially when accompanied by unexplained fever and loss of weight.

Physical examination may reveal, in addition to evidence of infection, undernutrition and abdominal tenderness, a fullness or mass in the right lower abdominal quadrant, composed of inflamed loops of bowel, adherent thickened mesentery and occasionally, walled-off abscesses of fistulae. The diagnostic importance of the rectal and perianal examination deserves reemphasis, since the finding of a perirectal abscess or fistula, not infrequently is the initial clue to the presence of regional enteritis. Proctoscopy may demonstrate a granular, slightly friable mucosa, punctate ulcerations surrounded by erythema; or the mucosa may appear relatively normal. Biopsy of the minimally inflamed rectum may demonstrate granulomatous lesions[39] and thus direct attention to the presence of regional enteritis.

In the roentgen diagnosis of the disease, the barium enema is important, but examination of the small bowel with special emphasis on the terminal ileum often is necessary and always is indicated if this area has not been visualized clearly on the colon study. Helpful diagnostic roentgen signs include the familiar string sign indicative of narrowing, dilatation proximal to an area of stricture, fixation of bowel loops, ulceration, cobblestoning of mucosa, representing submucosal edema, and the presence of skip areas of involvement.[40] Obliteration or distortion of the normal four or five fine parallel folds running longitudinally in the terminal ileum may suggest an "early" regional enteritis. Despite the importance of the roentgen examination, an apparently normal study in patients with appropriate symptoms and laboratory findings does not definitely exclude regional enteritis; in such instances, repeat x-rays are necessary.

The usual laboratory findings include leukocytosis, an elevated sedimentation rate, and the presence of occult blood in the stools. Ancillary laboratory information, such as alteration in serum electrolytes, decreased plasma proteins,[41,42] and evidence of malabsorption may help delineate the severity of the illness but they are not necessarily diagnostic of regional enteritis. Occasionally, extensive disease of the terminal ileum will be reflected in decreased absorption of vitamin B_{12} and other indications of malabsorption. Testing of isolated segments of intestine in patients undergoing surgery for disease of the large or small intestine, by means of radioisotope techniques, has indicated a diminution in the net absorption of water and sodium among patients with regional enteritis.[43] The abnormality may be related to lymphatic obstruction, injury to intestinal epithelium, and/or to an alteration in intestinal blood flow, but conclusive evidence for any of these possibilities is lacking. Elevation in the percentage of alpha-2 and beta globulins has been reported during phases of activity of regional enteritis, diminishing with quiescence of the disease.[42] Since similar trends have been observed in other diseases, the finding probably reflects a "secondary" phenomenon.

(Complete References will be published next month following Part II, the conclusion of this report.)

IMJ

Illinois Medical Journal

volume 126, number 5 November, 1964

'64 CONVENTION PAPER

ENUMERATION OF BLOOD CELLS; DETERMINATION OF HEMATOCRIT

Leonard C. Hurley, M.D./elgin

Presented as a portion of "Symposium on Proper Performance of Clnical Laboratory Procedures in the Physician's Office" at the Illinois State Medical Society Clinical Meeting, May 20, 1964.

IN THE COMPLETE EXAMINATION of every patient some objective hematologic measurement is necessary. Basic screening tests include hematocrit, hemoglobin, leukocyte count and examination of peripheral blood smear. Results of these screening tests or of the history and physical examination may dictate performance of additional and more exhaustive hematologic studies. The physician should be aware of the "normal" range for each test procedure by the particular method used, as well as the limitation of accuracy inherent in the test. The decision to perform laboratory procedures in the office, and what these procedures will be, varies with the geographic location, type of practice, and interest and ability of the physician in laboratory methods. Each test should be necessary for evaluation of the patient's condition, be performed with good equipment using adequate techniques and result in a test within reasonable limits of accuracy which are known to the physician. In addition the cost of performing the test based on initial cost of equipment, reagents, technician time, and general overhead should not be excessive.

Methods of determining the hematocrit and red and white cell counts will be presented. The advantages, disadvantages and sources of error in each procedure will be mentioned. The results of a series of tests performed by a trained technologist and by a group of students in a technician training program will be compared. Recommendations for suggested office procedures will be given with reasons to justify these recommendations.

Enumeration of erythrocytes or leukocytes entails accurately diluting a measured quantity of whole blood with isotonic fluid that will prevent coagulation. The number of cells present in a known volume of uniformly dispersed diluted blood is then counted. Finally, the number of cells present per unit volume of whole blood is computed as the product of the actual number of cells counted in the diluted specimen times the dilution factor times the volume factor. The usual apparatus consists of a Thoma pipet

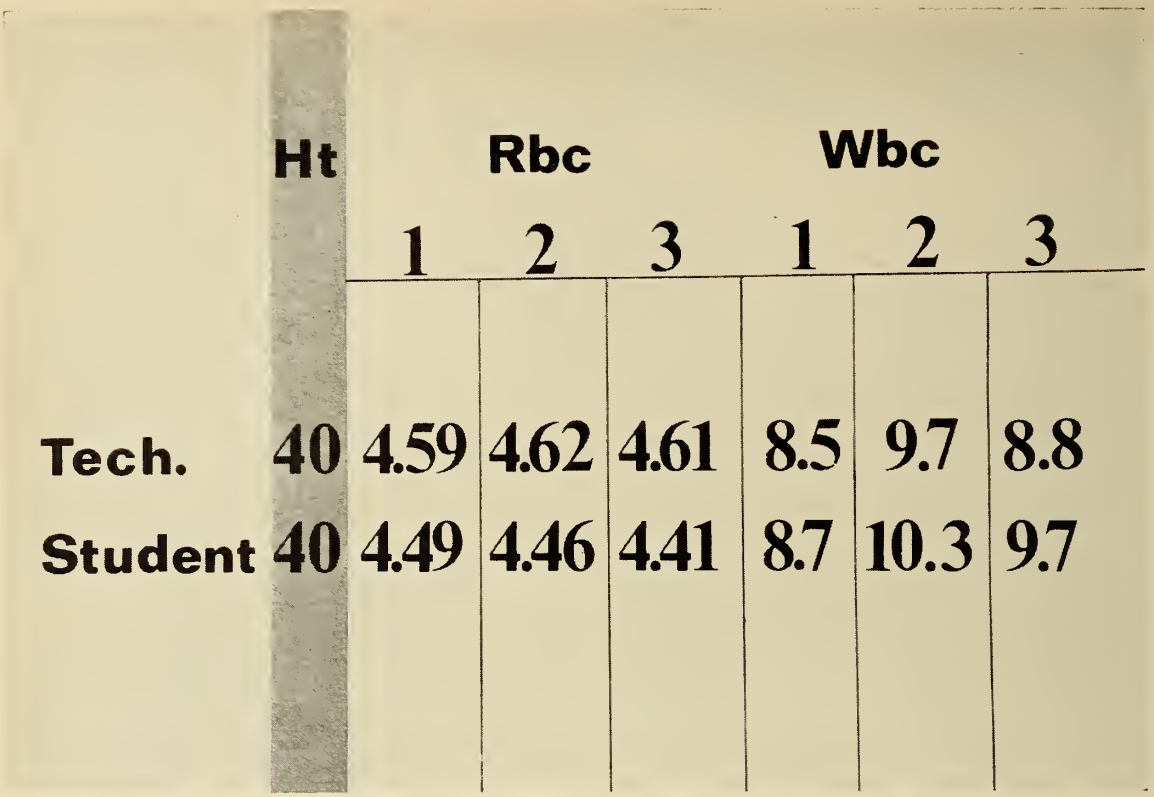


FIGURE 1. Comparison of mean values obtained by an experienced technician and by a group of relatively inexperienced students in a series of erythrocyte and leukocyte counts and micro-hematocrit determinations.

#1 is Coulter electronic cell counter method; #2 is Fisher Autocytometer method; #3 is Neubauser hemacytometer method.

for the erythrocyte count giving a 1:200 dilution and a similar pipet for the leukocyte count with a 1:20 dilution. Both pipets have a known range of accuracy. A good quality of improved Neubauer hemacytometer, accompanying cover glass and a microscope with suitable light source are needed. Disposable lancets for skin puncture or sterile needles and tubes for venipuncture are necessary.

Anticoagulated blood obtained by venipuncture is suitable if adequately mixed prior to use. Suitable diluting solutions free from dust, molds and precipitate will be needed. The diluent for the leukocyte count must have the property of lysing the erythrocytes leaving the leukocytes intact. The diluting pipets must be thoroughly agitated to give a uniform dispersion of the cells before loading the hemacytometer. The advantages include a modest cost for equipment if a suitable microscope is already available. Mechanical failure should be minimal with breakage of hemacytometer cover slips or diluting pipets accounting for much of the replacement. Disadvantages include the time necessary without interruption to perform the test, the necessity for an adequately trained technician using exacting techniques and the increased error resulting from doing too many counts a day or even worse, doing counts too infrequently.

Newer methods of cell enumeration result in greater accuracy and speed. The Coulter counter electronically enumerates individual cells in a saline suspension recording the total count. The relative cell size appears on the oscilloscope screen. Approximately 50,000 cells in a saline dilution are counted in 15 seconds. Recently a somewhat similar instrument, the Fisher Autocytometer has become available with comparable speed and accuracy. This instrument registers the reflected light of the individual cells and totals these for a given volume of diluted blood. There is no cell size evaluation with this instrument. Accurate dilution and uniform cell

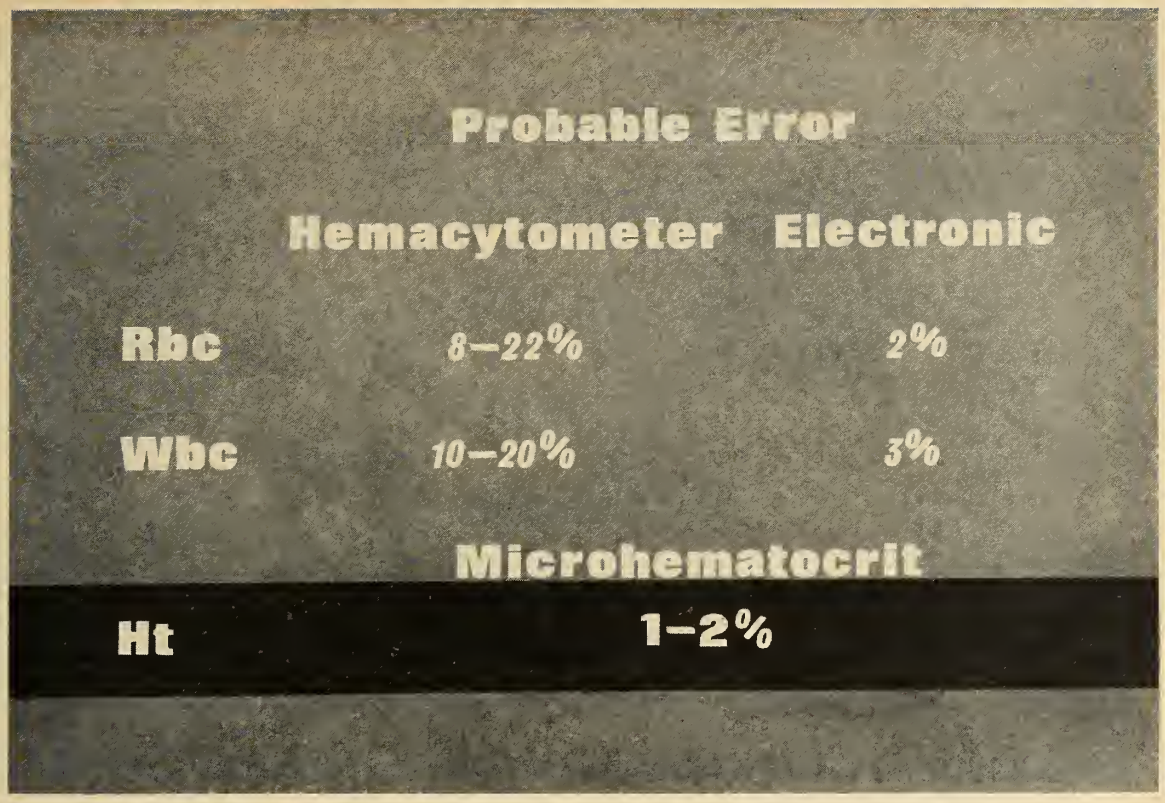


FIGURE 2. Probable error in performing cell counts and microhematocrit determinations.

suspensions for any of the methods are quite essential. With properly mixed venous blood samples automatic pipetting, diluting and automatic dispensing burets decrease the error of the procedure.

An experienced technologist performed 100 erythrocyte and leukocyte counts doing each in duplicate using the Coulter electronic cell counter, the Fisher Autocytometer and the manual hemacytometer methods. The same counts were done using identical methods, but not in duplicate, by several students in a technician training program with little previous experience. The mean values of the series for each method used are shown in Figure 1. The magnitudes of the difference in duplicate determinations for individual tests were as high as 22% for the chamber counts and substantially lower for the electronic instrument counts. The inexperienced technician showed a tendency for a somewhat lower erythrocyte count and a higher leukocyte count. The advantages of the electronic counting system include speed, greater accuracy and ease of operation by relatively inexperienced technicians. Disadvantages include initial substantial cost, routine periodic calibration to insure proper performance, electronic and mechanical breakdown with cost of repair and eventual cost of replacement. These instruments are economical only when a large number of counts are done daily for the life of the instrument. All methods share possible sources of substantial error including inaccurate apparatus, error in dilution technique, improper mixing of the diluted specimen, use of improper diluting fluids, hemolysis, lack of free flowing capillary blood sample, improper mixing of venous blood sample and error in recording the value on the report slip. The hemacytometer method, in addition, adds error from imperfect filling of the hemacytometer chamber, inaccurate counting of cells and mistakes in computing the final cell count. Doing all of the cell counts in duplicate and reporting the mean value will increase the accuracy but wlll also substantially increase the work load and time necessary to complete an individual test. The error for erythrocyte and leukocyte counts is substantially less using the electronic cell counting instruments rather than the hemacytometer (Fig. 2).

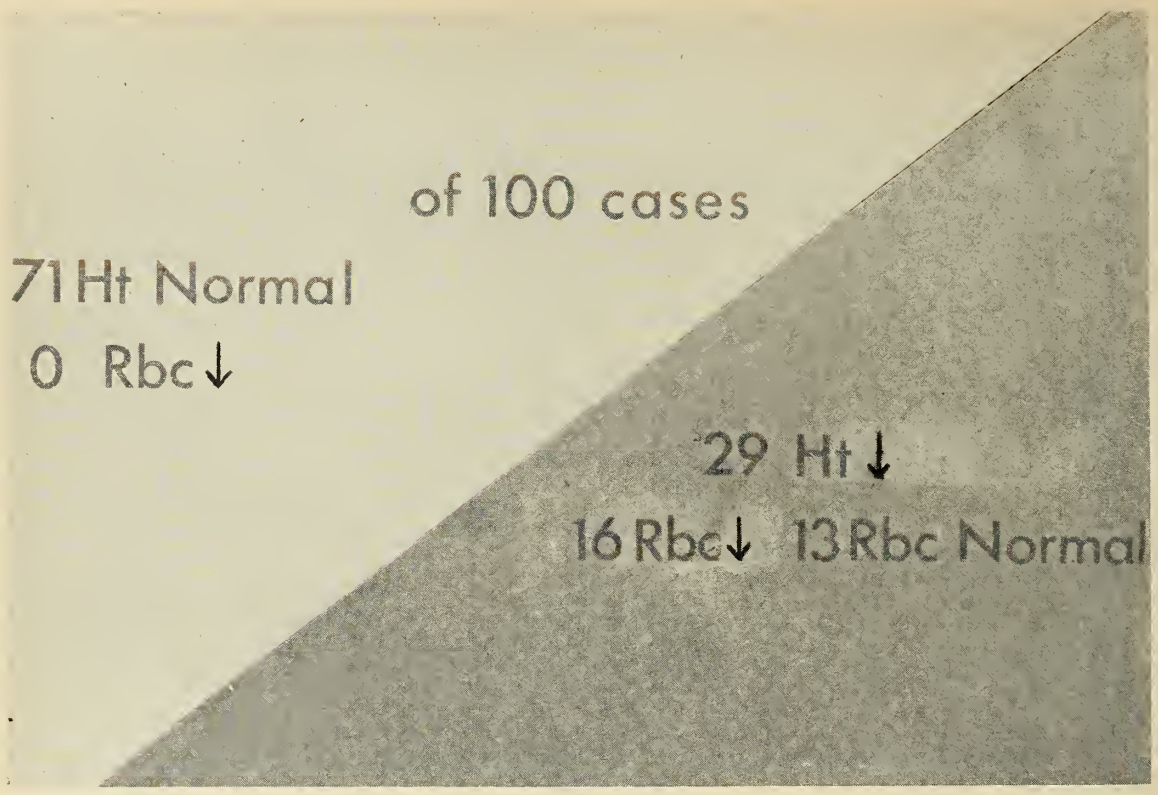


FIGURE 3. Comparison of the superiority of the microhematocrit over the erythrocyte count as a screening procedure in the detection of anemias.

In 1929 Wintrobe devised his standard sedimentation rate technique and described a calibrated glass tube for doing the sedimentation rate. When this tube is centrifuged, packing the erythrocytes at one end, the tube is suitable for determining the hematocrit. The hematocrit is the volume of packed red cells/100 ml. of whole blood expressed as a per cent. The blood is centrifuged for 30 minutes at 3,000 rpm. In addition to determining the volume of packed cells, examination of the plasma gives some indication as to the presence of jaundice, hemoglobinemia or lipemia. The thickness of the buffy coat correlates with leukopenia or leukocytosis.

In recent years the microhematocrit procedure has been adopted for general use in the clinical laboratory. Small capillary tubes are filled with a free flowing capillary blood specimen or from a well mixed anticoagulated venous blood specimen. One end of the tube is sealed with a plastic cap or is fused in the low flame of a microburner. The capillary tube is centrifuged at 12,000 rpm for 4 minutes. The length of the packed red cell column is compared to the total length of the blood sample and expressed as a per cent. Careful inspection of the supernatant plasma will disclose clinical jaundice or lipemia and the buffy coat reflects leukocytosis or leukemia. A mechanical hematocrit reader of several types is available although a simple ruler graduated in mm., will suffice.

Duplicate microhematocrits were done on a series of 100 blood specimens by an experienced technologist. Students in a training class for laboratory technicians performed the same hematocrits but not in duplicate. The following results were obtained (Fig. 1). The microhematocrit determination was superior to the erythrocyte count judged by the range of error, reproducibility and accuracy when done by either an experienced technologist or relatively inexperienced technicians. The equipment necessary includes an adequate centrifuge with a head capable of receiving microhematocrit tubes and with a speed of 12,000 rpm. Capillary tubes with suitable plastic caps are necessary. An alternate method of sealing the end of the

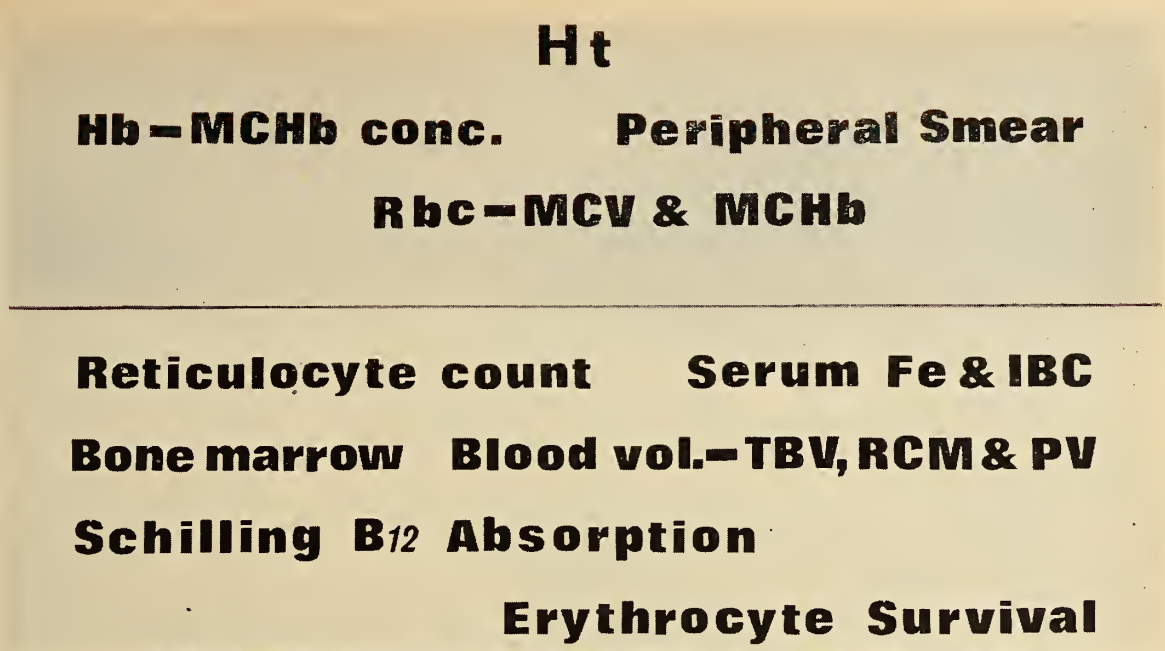


FIGURE 4. Abnormalities revealed by an accurate, simple screening procedure will indicate what additional diagnostic procedures are needed.

capillary tube is by use of a small inexpensive microburner. A supply of sterile lancets or materials for obtaining venous blood such as disposable needles and vacutainer tubes are needed. Some method of measuring the length of the packed cells and total blood column completes the list. The total cost of this procedure is not excessive.

The microhematocrit centrifuge creates some heat and a moderate amount of noise. Mechanical or electrical breakdown does occur and periodic servicing and repairs will be necessary. At the time of servicing the centrifuge should be checked with a tachometer to insure adequate speed. The accuracy is quite good with a minimal error of ½% and an average error of 1-2%. (Fig. 2). Some of the sources of error include hemolysis of the blood during collection or by improper heating of the tube when sealing the end with the microburner, resulting in false low hematocrit values. Insufficient relative centrifugal force or too brief a centrifugation will result in false high hematocrits. Errors in reading the length of the packed cell column and errors in transcribing the results onto the report from can occur.

The hematocrit is the most accurate method of determining the presence or absence of anemia or polycythemia. The hemoglobin determination is less accurate and the erythrocyte count is fare less accurate. The usual error is ±2% for the hematocrit, ±5% for the hemoglobin and ±16% for the erythrocyte count. If the hematocrit or hemoglobin values or examination of a stained peripheral smear shows abnormalities, then a careful erythrocyte count should be done. If the hematocrit and hemoglobin are both within "normal" range, then the erythrocyte count will almost invariably be within the normal range also. In our series of 100 patients, 29 had hematocrits below normal. Of these, 16 had erythrocyte counts below normal while 13 had erythrocyte counts within the normal range. Of the 71 patients with normal hematocrits none had an erythrocyte count below normal. (Figure 3). In this series, if only hematocrit determinations were done, not a single anemia would have been missed. However, if only an erythrocyte count had been done on these patients, 45% of the anemias would have escaped detection because although the hematocrits were low, the erythrocyte counts were within normal range, reflecting microcytic anemias, probably of iron deficiency type.

If the hematocrit is abnormal additional hematologic screening tests should be done for more definitive diagnosis. (Fig. 4). The microhematocrit procedure represents the best single hematologic screening test now available.



PART II
OF A
TWO PART
SERIES

a review by

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DNA Molecule photo courtesy of Abbott Laboratories, North Chicag

The Peutz-Jeghers Syndrome

This disease is characterized by melanin spots of lips, buccal mucosa and digits. Polypoid lesions may be present throughout the gastrointestinal tract, particulary frequent in the small bowel. First described by Peutz in 1921, it was redescribed by Jeghers in 1944. Many cases have been published since. Initially thought to harbor the danger of malignant transformation,[28] it is now generally accepted that the polyps of the small bowel are rather hamartomas, and their malignant potential is very low. But, our attitude toward the colonic polyps should be reserved. The pattern of inheritance is autosomal dominant.

The Gardner Syndrome

This disease originally[29] comprised bone tumors involving facial sinuses, mandible, femoral shafts, tibiae, humeri, etc. The tumors consist of laminated bone with small connective tissue spaces. There are also mutiple polyps in the colon with more or less advanced de-differentiation. All 6 patients of that family originally described had polyps. Two of 6 had carcinoma of the colon. All had bony tumors, several had subcutaneous sebaceous cysts. The pattern of inheritance is that of a single dominant gene, which differs from the one that determines multiple polyposis. In another report[30] a similar condition was described with multiple cartilaginous exostoses, sessile and pedunculated. In a recent review[30] ninety cases of this disease have been collected. Fibrous tissue masses were described in 10 patients, lipomas in 10, fibromas in 11, and fibrosarcomas in 6 patients. Osteomas were present in 39 individuals, and sebaceous cysts in 33. Since colon or rectal malignancies were observed in 32 of the 90 cases, this is the main reason for worry with this disease. As a corollary, a patient with multiple hard or soft tumors of the kind described above, should be investigated for colonic polyps and carcinoma.

Turcot's Syndrome

A brother and sister have been described[31] with polyposis of the colon associated with a tumor of the central nervous system: a medulloblastoma of the spinal cord in one case and a glioblastoma of the frontal lobe in the other. Since the parents of the patients were third cousins, the pattern of an autosomal recessive has been assumed.

Multiple Endocrine Adenomatosis

This is a hereditary condition due to an autosomal dominant. It encompasses islet cell tumors of the pancreas, parathyroid adenomas, adencortical adenomas, etc. A family has been studied[32] in which there was an association of adenomata of the pancreas and multiple polyps in the colon.

Familial Occurrence of Ulcerative Colitis and Regional Enteritis

A number of observers reported cases in which ulcerative colitis and regional enteritis occurred in several members of the same family. Moltke, (quoted by Houghton and Naish) described 11 cases of ulcerative colities in 5 families. Jackman and Bargen[33] described 17 families with 2 or more members with ulcerative colitis. Paulley[34] reported a family incidence of 11.3% in his study of 173 cases of ul-

cerative colitis. Felsen and Wolarsky[35] in a study of 1204 of chronic ulcerative colitis and regional ileitis had 34 cases of ulcerative colitis and 2 of ileitis in 21 families. In regional enteritis too, such family occurrence of both diseases in certain families has been observed. Houghton and Nash[37] described 7 families in which 14 cases of ulcerative colitis 4-of regional enteritis and 3-of the former occurring after surgical treatment of the latter. The authors felt that there is a hereditary predisposition in the above diseases and that no dividing line could be drawn between them.

In a recent study of 66 probands[38] of a total of 1084 patients with ulcerative colitis gave evidence of disease in their families with 89 cases. The latter had ulcerative colitis in 75, regional enteritis in 13 and ileocolitis in one case. Twenty-four of 89 have been examined; in 8 instances 2 members of the family had disease, in 14 instances—3 members; in one instance there were 4 members and in an additional instance—6 members of the same family.

Twenty probands of 185 patients with regional enteritis gave evidence of disease in 22 other members of their families. Nine had ulcerative colitis, 12—regional enteritis and one —ileocolitis.

Five probands of 70 patients with ileocolitis had diseased members in their families. Four of them had ulcerative colitis and one had regional enteritis. In summary, 91 of 1335 patients had family occurrence of disease, a frequency of about 7%. Winstone, Henderson and Brooke[39] studied the ABO blood group distribution in 227 patients with ulcerative colitis and the occurrence of secretors and nonsecretors among them. No significant differences could be found between ulcerative colitis patients and controls with respect to ABO distribution, Rh factor occurrence or the secretor state.

Genetics of Jaundice, Liver and Biliary Tract Disease

A. Repatic bilirubinemia.

Bile pigments derive mainly from destruction of hemoglobin in the reticuloendothelial system. Two varieties of bilirubin are classically distinguished: one is of a direct reaction, the other of a delayed reaction when diazotized with sulphanilic acid. Considerable confusion existed until 10 years ago with regard to the significance of these reactions and the relation of the 2 bilirubins to obstructive and hemolytic types of jaundice. Then in 1953, Cole and Lathe, using reverse phase partition chromatography were able to demonstrate the presence in bile of pure, unconjugated, water insoluble bilirubin and of conjugated, water soluble bilirubin. Later, it was demonstrated that the conjugation with glucuronic acid occurs in the liver and is catalyzed by the enzyme glucuronyl transferase of the microsomal fraction of liver homogenates. In conclusion; bilirubin has to be conjugated in order to be excreted in the bile.

In 1900, Gilbert[40] first described the chronic familial non-hemolytic acholuric jaundice. Since then several entities have been separated; one variety occurs in full term infants in which it takes approximately 10 days for the glucuronide conjugating system to develop. In some babies, due maybe to the inheritance of an autosomal recessive, the above system never develops and such cases have been described by Crigler and Najjar.[41] Some cases occur in early adolescence and these are known as patients with constitutional hepatic dysfunction. In these there is a spectrum of severity of the disease perhaps due to the various degrees of expression, of the mutant gene. Work is being done[42] to enable diagnosis of heterozygotes using liver biopsies of patients and an artificial receptor system. Others[43] have suggested the use of radioactive-iodide labeled iodipamide and radioactive-iodide labeled Rose bengal for identification of patients with Gilbert's disease.

The Dubin-Johnson[44] syndrome is characterized by nonhemolytic jaundice. Bile appears intermittently in the urine, and there is frequently sulfabromophthalein retention and the gallbladder ordinarily does not visualize. The liver may be normal in size or enlarged and has been grossly described as hyperpigmented, slate-blue, dark mahogany or black. Coarse pigment granules are seen in otherwise normal parenchymal cells. These granules fluoresce under ultraviolet light, they are positive to the periodic acid-Schiff stain and they are negative at the Gmelin reaction. They are probably a lipofuchsin and are the expression of the excretory difficulty of the hepatic cells. Klatsky and Huck[45] described a case in which the familial occurrence in the father and a sister of the patient

has been mentioned. Beker and Read[46] described this syndrome in a mother and her 12 year old son. John and Knudtson[47] recorded the disease in siblings and Dubin[48] in a review of 50 cases found a familial history in 11 patients (of 37 or 30%). In the 5 cases reported from Israel, four occurred in Persian Jews, who are known for intermarriage. The true pattern of inheritance of this disease is still unknown.

In 1948 Roter et al.[49] described a familial type of a nonhemolytic jaundice in 2 families in which there was jaundice with direct reacting bilirubin and bromsulphalein retention. Liver histology and other parameters were normal. Schiff et al.[50] described a similar case in a woman of Japanese extraction who had a jaundiced sister presumably with the same disease. While glucuronide conjugation by the salicylamide test was normal, there was delayed excretion of intravenously administered bilirubin. There was an increase of free and conjugated bilirubin in the serum; the liver biopsy contained no abnormal pigments; the gallbladder did visualize when telepaque was given orally. The conclusion of the authors was, that there is in these cases a diminished uptake of bilirubin by the hepatic cell and maybe there is a defect in bilirubinglucuronide excretion.

Liver disease and jaundice in early infancy are a complex diagnostic problem. There exists, as mentioned above, a physiologic jaundice which appears the first day after birth. It is related to a slow development of the glucuronyl transferase system and is of little consequence to the normal development of the child. The ABO incompatibility is of an obvious genetic interest. It is also in the great majority of cases a benign condition and only very rarely will a child succumb from this condition because of an unusually severe jaundice with kernicterus. Erythroblastosis fetalis is of a genetic interest too and, is more important than the previous condition, both from the hematological aspects and from the hepatic signs and symptoms. It occurs when an Rh negative mother is sensitized with erythrocytes of an Rh positive fetus. The expression of such a sensitization can be determined by finding blocking antibodies and saline agglutinins in the mother's serum at elevated titers. Kernicterus is a severe complication usually fatal to such infants. Clinically, three varieties of erythroblastosis fetalis have been described; hydrops universalis, icterus gravis and congenital anemia. As far as the liver is concerned, cases have been described characterized by necroses in the liver, by fibrosis and by cirrhosis of the liver. Craig[51] reported a large series of patients with crythroblastosis fetalis and outlined the sequence of events leading to cirrhosis. Another condition leading to liver cirrhosis is galactosemia,[52] a severe disease with autosomal recessive inheritance. It starts early after birth with vomiting and reluctance to feeding, presence of reducing substances in the urine and rapid enlargement of the liver. Histologically, there is fibrosis starting from the portal areas and bile duct proliferation.

There is a defect of galactose-1-phosphate uridyl transferase with inability to utilize galactose. The subsequent reaction is blocked; galactose 1P+ UDP Glucose = UDP galactose + glucose phosphate. Withholding galactose containing foods leads to improvement of clinical symptoms: this is a good example of preventive medicine based on knowledge of the mechanisms involved in this inborn error of metabolism.

In discussing the genetic aspects of liver disease we have to include Von Gierke's disease, characterized by enlargement of the liver and kidneys with excessive deposition of structurally normal glycogen. The latter may also be found in the proximal tubules of the enlarged kidneys. There is no or little response to epinephrine or glucagon. Hypoglycemia develops. There is also ketonemia, lipemia and ketonuria. The liver is packed with large cells filled with glycogen and having a small central nucleus. The defect consists of a glucose 6 phosphate phosphatase deficiency and a galactose infusion will not cause a rise in blood glucose. Liver function tests are normal. Liver cirrhosis is found also in two other diseases of genetic nature and of the glycogen storage group. One is characterized[53] by deficiency of amylo 1,6 glucosidase (debrancher enzyme deficiency, the other[54] by deficiency of amylo (1, 4—1, 6) transglucosidase. In both there is a recessive pattern of inheritance. In the first an abnormal glycogen is deposited in the liver and muscle, consisting of short outer chains. In the second variety abnormal glycogen consisting of abnormally long chains is deposited in the liver,

spleen, lymph nodes, intestinal mucosa and other organs. Liver cirrhosis develops and contributes to the poor prognosis of both conditions.

Genetics of Wilson's Disease

This rare disease is characterized by copper deposits in the central nervous system, in the liver, eyes and other organs. Clinically there are neurological symptoms of spasticity, tremor and slurred speech. The liver may be involved and present the picture of post-necrotic cirrhosis. Biochemically, there is a decreased value of ceruloplasmin in the serum (Normally—23 mg.%), decreased serum copper (Normally—80 to 120 mcg.%), increased urinary copper (Normally—0 to 50 mcg. per 24 hours). There is no clear understanding as yet, as to the reaction blocked by the defective gene in this disease. It could be a defective synthesis of ceruloplasmin, abnormal tissue proteins (which show an increased avidity for copper), inability to convert inactive ceruloplasmin (C*D) to an active form (C*C). Nevertheless, it is considered[55] that the pattern of inheritance is that of an autosomal recessive. Of 30 sibships collected, 40% were Jews and 17% Italians with a first cousin consaguinity of 0.37 and a total consanguinity of 0.43. A test to discover the heterozygote carrier would be of help in better understanding of this disease.

Perinatal Idiopathic Hemochromatosis

Fienberg[56] described 2 pairs of siblings who lived only a short time after birth. Their livers presented at autopsy atrophy of hepatic trabeculae, many giant cells and very little inflammation. Iron deposition as evidenced by Gomori's iron reaction resembled that of adult hemochromatosis. Since mobilization of iron from intracellular deposits may be governed by the equilibrium of the oxidation-reduction reactions:
Ferric — disulfide — ferritin⇌ferrous sulphydryl — ferritin which depends on presence of glutathione, a defect in glutathione synthesis may prevent iron mobilization from cells. This speculation is based on a presumed analogy with the glucose 6 phosphate dehydrogenase activity, also dependent on the presence of reduced glutathione.

Hemochromatosis

This disease is characterized by the triad, diabetes, skin-hyperpigmentation and liver cirrhosis. It is considered the result of an increase of body iron storage with tissue damage. Many authors[57] have observed the familial occurrence and the hereditary character of the disease.

Debré et al.[58] examined 30 brothers of patients with hemochromatosis and found 3 of them with clinical evidence of the disease. They all had high levels of serum iron and elevated iron saturation coefficients. When the 67 offsprings of these patients were investigated, sons above 15 had higher iron levels than the controls. Some of the adult sons were hypersideremic, others had normal values. This heterogeneity suggests that hemochromatosis is manifest in heterozygotes for 1 gene. When patients are born to consanguineous parents, the resulting juvenile form of hemochromatosis is due to a homozygote state. The rate of iron absorption and/or storage depends on the genic dose. Davison[59] found 20% of relatives of hemochromatosis patients with elevated plasma iron levels. The usual pattern of inheritance is due to an autosomal dominant with incomplete penetrance. In case of consanguineity, there might occur an autosomal recessive type of inheritance.

Polycystic Liver

The congenital cysts of the liver are usually multiple, replace normal parenchyma and are frequently associated with cystic renal disease. There is typically absence of splenic enlargement. The cysts derive from dilatations of adherent bile ducts. A familial occurrence has been observed early.[60] In a study of 24 cases from Mayo Clinic[61] no familial occurrence could be observed. Recently,[62] 3 cases have been reported in siblings, who had an upper gastro-intestinal hemorrhage as the presenting symptom.

Cholelithiasis

The familial occurrence of cholelithiasis has been noticed by many observers. The disease is very frequent in the general population, specially in middle aged and old women. Cau-

tion is therefore necessary to assume heredity when chance alone could explain such familial occurrence. Cholelithiasis has been observed in identical twins by several authors.[63-66] Doig reported concordance in 9 of 23 identical twins, and in 42 fraternal pairs of the same sex. The study of inheritance of this disease is rendered difficult by the occurrence of latent cases, which do not come to medical attention. Kjlbye and Nielson[67] studied 1369 patients with gallstones with respect to their ABO blood groups. They found that persons with group A run a 17% greater risk to get gallstones disease. Such a finding could be significant if confirmed from other sources.

An increased frequency of gallstones has been observed in hereditary spherocytosis. Cholelithiasis in such cases has been observed also in children. Hereditary spherocytosis is characterized by bouts of hemolysis. The erythrocytes of these patients are ball-shaped rather than biconcave. They do not withstand the usually tolerated hypototonic solutions. The disease is due to a mendelian dominant gene. There has been no record of a homozygous state of this disease.

Cystic Fibrosis of the Pancreas

Heterozgous carriers do exist[68] and they have symptoms of disease at 20-30 years of age. These consist of chronic bronchitis, pulmonary emphysema, polyposis of sinuses, exocrine insufficiency of the pancreas, loss of sodium with hypotension and peptic ulceration. When relatives of 84 adult patients with mucoviscidiosis were investigated, one-half of the parents, siblings and children had symptoms. The hereditary pattern is that of an autosomal dominant. These heterozygotes carriers have been estimated at 5% to 6% of the European population. Heterozygotes can be identified by analysis of mucoproteins in their sweat when a sweat chamber at 110° F. is used. Symptoms of mucoviscidiosis have been found in patients with diabetes and enchondromatous dysostosis. The homozygous state is seen in infants and children with cystic fibrosis of the pancreas.[69] These children, born to well parents, die before maturity. No dominance and no sex linkage has been observed. The disease behaves as a typical single recessive fatal character.

Hereditary Pancreatitis

Several pedigrees have been published by the Mayo group[70-72] of familial cases of chronic relapsing pancreatitis. They were characterized by the fact that the symptoms began earlier in life than in the non-hereditary type of he disease. There were more women in his group while in the non-hereditary type, men outnumber greatly women. Alcohol, hyperlipemia and gallbladder stones did not play a role in the hereditary type of disease. An autosomal dominant, non-sex linked gene seems to be involved. When serum and urine aminoacids were assayed in both forms (hereditary and nonhereditary) of pancreatitis, the values in the former exceeded those of the latter form of disease. Lysinuria was present in 7 of 10 cases of hereditary pancreatitis and only in one of 11 patients with the non-hereditary form. The authors tentatively suggested the lysine test for differential diagnosis of both forms of disease.

Multiple Benign Adenomatosis with Islet-cell Tumors

The familial occurrence of multiple adenomas has been reported from the Mayo Clinic[73] in 4 of 8 such cases. The simultaneous occurrence of pituitary, parathyroid and pancreatic islet adenomas has been observed[74] in a father and in four of his nine children. It was thought due to an autosomal dominant gene. The frequently occurring duodenal ulcer has been considered a manifestation of the abnormal gene. Moldawer et al.[75] described a patient with 2 parathyroid adenomas and a pituitary adenoma, whose daughter had 3 parathyroid adenomas removed and who had also 2 islet insulin producing adenomas in the pancreas.

Primary Systemic Amyloidosis with Gastrointestinal Involvement

In a review[76] of 154 cases of this entity, 44 had gastrointestinal involvement. The familial aspect of this disease were striking. In an investigation of a large family pedigree of 66 members, 29 had evidence of the disease process. It seems to have a dominant pattern of inheritance. Lipoproteins were found elevated

in the S 25-40 fraction. It has been assumed that the disease may be due to an abnormal lipoprotein metabolism.

Familial Mediterranean Fever (FMF)

This entity has been recently described[77] although similar disease pictures were known under the names of periodic fever, periodic abdominalgia, etc. In an evaluation of 232 cases of this disease,[78] a total of 664 sibs were considered. Only Sephardic and Iraqui Jews were affected. The ratio of affected to non-affected was 30.2% (instead of 33.3% expected in the recessive inheritance). There were 25 first cousin marriages and the total frequency of consanguineous marriages was 18.2%. The disease was frequent among brothers and sisters and rare among antecedents; in conclusion the pattern of inheritance was that of an autosomal recessive.

Of 141 cases with this disease,[79] 47 were found to have nephropathy. Six patients had an autopsy after death from renal failure. Twenty patients were examined for amyloidosis and 14 were positive for this complication. The authors thought that amyloidosis and clinical FMF are independent parallel manifestations of the disease, both under genetic control. Priest and Nixon[80] described a milder form of the above disease and named it familial recurring polyserositis. A familial history was obtained in five of 20 patients. In these cases there were also disease manifestations in siblings. All these patients had normal renal function.

Celiac Disease

This interesting disease is still of unknown causation; many explanations have been brought forward for its etiology. These included: a change of physicochemical nature in the absorptive mechanism of the intestine, a defect in phosphorylation, impaired mechanical function, vitamin deficiency, gastrointestinal allergy and infection. It has been noticed that it tends to run in families. Thompson[81] examined 109 sibs and 119 index cases of celiac disease, 208 parents and 416 grandparents. Celiac disease was elicited in 13% of sibs, in 6% of parents and 1% of grandparents. He also found a high frequency of diabetes in celiac patients and their relatives. So was the maternal age significantly higher and the birth rank more advanced than in controls. Carter et al.[82] had 88 test cases of proven celiac disease with gluten intolerance. These were 32 males and 56 females with a sex ratio of 0.57 instead of the expected 1.06. No parents were blood relatives. Five cases were found among 205 sibs of the index cases, 2 cases among 85 fathers and single cases among 580 aunts and uncles and 806 cousins. There was no increase of other gastrointestinal disorders of allergic conditions or of diabetes. There was no correlation with birth order, maternal age or socio-economic group. In conclusion, there seems to be a lack of clear-cut Mendelian type of inheritance in celiac disease and it may be assumed it is not due to a defect in a single enzyme. Joske and Benson[83] analyzed the ABO blood groups of 28 patients with nontropical sprue and found a significant preponderance of blood, group O. The authors speculate that a genetic factor may be involved in idiopathic steatorrhea.

Whipple's Disease

The genetics of Whipple's disease are still quite obscure. There have been in the literature two reports[84] of 2 siblings affected. In the relatives of Whipple's disease-patients, a high frequency of mental illness and diabetes has been noticed. No clear-cut pattern or association could be worked out as yet.

Aganglionic Colon

There seems to be quite firmly established[85] that a narrow, aganglionic segment of the colon is the cause of partial obstruction, observed in such cases. Resection of the aganglionic segment is the right approach to this problem. There has been a definite familial tendency to this disease in infants. A family has been reported with 3 siblings with the disease and other two died who might have had the above abnormality. So was the disease observed in a set of two identical twins. In the case of aganglionic colon, more observations are needed for a better study of the hereditary pattern.

Genetics of Some Bleeding Lesions of the Gastrointestinal Tract

Hereditary hemorrhagic telangectasia,[86] commonly known as Osler-Rendu-Weber disease may manifest itself by repeated bleedings from the gastrointestinal tract. The presence of other members of the family with similar phenomena and the presence of telangectasia on the skin or the accessible mucosae may help in formulating the diagnosis. The bleeding usually comes from thin, dilated vascular channels with no muscle layer to contract. Hepatosplenomegaly may be present because of lesions of the liver and spleen of telangectasic nature, because of congestive-heart-failure in states of anemia or, because of post-transfusional homologous serum jaundice. The pattern of inheritance is that of an autosomal dominant.

Another similar condition is Angiomatosis of the bowel.[87] It is not merely a dilatation of preexisting channels, but there is a true neo-formation of blood vessels. It is also due to an autosomal dominant gene.

Pseudoxanthoma elasticum affects the skin, eyes and the cardiovascular system. Clinically, there may be absent pulse with calcification of arteries. Intermittent claudication may result, easy fatigability and gastrointestinal hemorrhage. Angioid streaks of the fundus of the eyes is quite a characteristic finding. The disease is due to an autosomal recessive gene and is attributed to the so-called "elastotic degeneration" of connective tissue fibers, while others consider degeneration of elastic fibers the primary cause of symptoms. There are small yellow nodules in the skin similar to those seen in Xanthomatosis; hence, the name of the disease.

There have been described cases of Turner's Syndrome in familial aggregations. Some of these cases have been associated with intestinal telangectasia and consequently, with intestinal bleeding. The disease is characterized by the sex chromatin pattern known as XO and there is gonadal aplasia. The pattern of inheritance is still obscure.

Von Recklinghausen's[88] disease is known for the presence of "café-au-lait" spots on the skin and of multiple subcutaneous and intestinal nodules. Histologically, there are Schwann-cell proliferations, both in the brown spots and in the nodules. Frequently, there is gastrointestinal hemorrhage due to ulceration of the submucosal nodules. The pattern of inheritance is that of an autosomal dominant.

Discussion

This review of gastrointestinal diseases with respect to their genetic aspects does not cover all the varied circumstances in which the Gastroenterologist may be called upon for exercise of his medical art. There are many more gastrointestinal diseases and there are many conditions which do have gastrointestinal symptoms without being strictly of organic gastrointestinal nature. Porphyria, a known disturbance of porphyrin matabolism, may appear with symptoms of nausea, vomiting and severe abdominal pain. Other patients with this disease may have jaundice, hepatosplenomegaly and cirrhosis. The different types of this disease have different patterns of inheritance: Medelian dominant in the acute type and recessive in the congenital form. Porphyria is frequently misdiagnosed with the unfortunate result of superfluous abdominal surgery.

Gastrointestinal symptoms are frequent in the so-called collagen diseases, because of organ involvement by the disease process or because of association with an unrelated gastrointestinal disease. These maladies, also present some familial occurrence, indicative of the importance of their genetic aspects. Half of the relatives of patients with systemic lupus erythematosus[89] have antinuclear factors in the serum. Similar findings have been obtained when relatives of patients with juvenile rheumatoid arthritis were examined.[90] Scleroderma also may appear with gastrointestinal involvement[91] or may be associated with gastrointestinal disease.[92] In a significant number of blood relatives of scleroderma patients, serum abnormalities were found[93] similar to those seen in other collagen diseases. There is perhaps in such families, a genetic predisposition for abnormalities in the immune responses.

What can be done to increase the knowledge of genetics of disease? Better information about familial occurrence and better diagnosis of heterozygote states, mentioned in the introduction, will help. Here a word of caution is appropriate; family history is sometimes a poor index of hereditability and lack of a familial

precedent is no sign of absence of a genetic factor in a given disease. A freshly appeared mutation and a rare recessive trait may be present without previous cases in the family. Nevertheless, good family histories and good medical records will provide data for useful retrospective genetic studies.

Extensive treatment has been given in this review to statistical evidence of prevalence of certain blood groups in several gastrointestinal diseases. Such prevalence does not necessarily mean direct causal relationship. It may be an indication of some additional association with factors more directly related to susceptibility to a given disease. With this in mind, the sharp criticism[94] to studies of association between blood group antigens and disease could be greatly mitigated. Certainly, the similarity of findings from an increasing number of countries makes such reports of high significance.

An important fact emerged from this review of the genetics of gastrointestinal diseases; the heterogeneity of some diseases commonly considered homogenous. The ordinary esophageal carcinoma has been found to have an extrinsic type of causation.[20,21] The esophageal cancer described by Howel-Evans et al.[19] in 18 members of 2 families is an exception to the above rule. A mutation of a gene had to be assumed with the result in a disease that per se is not the result of genetic interference.

Similarly, discrete colonic polyps do not seem to have, as far as we know, a clear-cut genetic pattern of inheritance. In the kindred described by Wolf,[27] an inheritance pattern was observed due to an autosomal dominant gene. A large progeny has helped to pinpoint the genetics of this condition.

Polyp, cancer or other diseases may encompass a heterogeneous group of diseases in which the outward expression is similar, but which may have a diverse etiology.

Awareness of these facts may focus our attention on the genetics of disease and increase the understanding of its nature; the net gain will be better treatment and prevention.

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USE OF DESFERRIOXAMINE IN A CASE OF ACUTE FERROUS SULFATE POISONING

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Iron poisoning is an ever present problem in the community. Between June 1963 and June 1964, there were 1182 admissions to the Children's Division of the Cook County Hospital for accidental ingestion of poisons, 331 of which were ingestions of pills. Of these 331 admissions, 18 were for ingestion of iron in the ferrous form. The prevalence of iron deficiency anemia and the presence of iron pills in the home make every unlocked medicine chest a source of possible poisoning. Because most iron preparations are coated tablets, the two-year-old child cannot readily differentiate them from a popular candy-coated chocolate candy. Three grams of iron have been fatal, and the ingestion of as little as one gram should be considered toxic to the young child.[1]

Nausea, vomiting, and lethargy begin within 30 to 60 minutes after ingestion of iron in toxic amounts. The physical state rapidly deteriorates to that of a moribund child in profound shock and acidosis. The cause of this shock is still unknown. It is known that injections of elemental iron into the blood stream reproduce the symptoms of iron poisoning. Iron, when present in large quantities, passes directly through the intestinal wall into the blood by diffusion.[2] There is no mucosal barrier to inhibit its absorption. The free iron is rapidly picked up by the iron-binding protein, transferrin.[3] In combining with the transferrin, the ferrous ion is oxidized to ferric. Any unbound ferrous ion is also oxidized to ferric hydroxide. The hydrogen ions released by these reactions are responsible for the severe acidosis.[4] This free iron is cleared by the reticuloendothelial system, primarily the Kupffer cells of the liver.[5]

With proper fluid therapy, this period of shock can be reversed. Then a period of relative stability, lasting 12 to 24 hours, intervenes. The third phase leads to death because of irreversible shock, liver failure, and pulmonary edema. This delayed phase may well be the effect of the free iron's interference with the liver cells' oxidative enzyme systems,[6] causing peri-portal cell necrosis;[7] the cell necrosis then releases ferritin, a vasodepressor agent, into circulation.[8]

If the child survives the episodes of shock, a fourth phase of gastric scarring may occur with

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symptoms of vomiting, weight loss, and gastric retention in four to six weeks. This deformity is secondary to the corrosive gastritis caused by the direct action of the iron salt on the mucosa of the stomach. The ulceration of the gastric muscularis heals by scar tissue formation causing the characteristic hour-glass deformity seen on radiographic examination.[9]

Therapy has been directed towards the prevention of absorption of iron by inducing emesis and lavage with sodium bicarbonate. Since the body has no mechanism for the excretion of absorbed iron, chelating agents have been employed, notably calcium disodium versenate or Edathamil (EDTA).[10] These combine with the ferric form of iron to form a water soluble compound that can be excreted by the kidneys. Because a supply of a new chelating agent, Desferrioxamine B (DFOM),* was available to us, we were able to use it in treating a recent case of iron poisoning. Others have also reported success in treating acute iron poisoning with this chelating agent.[11,12] It is the purpose of this case report to bring to the attention of the medical profession a new, effective agent for use in cases of acute iron toxicity.

Case Report

A three-year-old Negro male weighing thirty-four pounds ingested an unknown quantity of ferrous sulfate tablets (equivalent of five grains ferrous sulfate each) at 7 p.m. on April 2, 1964. The child began vomiting approximately thirty minutes later and was taken to a neighboring hospital where gastric lavage with the universal antidote was performed at 8 p.m. He then was transferred to the Children's Division of the Cook County Hospital. Upon arrival in the Examining Room at 10 p.m., the child was semi-comatose with blood pressure unobtainable, pulse 110/min, and respiration 24/min. He responded only to painful stimulation. The physical examination was otherwise normal. He was immediately taken to the ward where gastric lavage was repeated with sodium bicarbonate, and one partially dissolved tablet was recovered. (Subsequent analysis showed it contained iron.) It was not determined how many tablets were recovered on the first lavage.

An aqueous solution of 500 mg of desferrioxamine (hereafter abbreviated DFOM) was instilled in the stomach. Saline enemas were given until clear. IV fluids were started and one gram of DFOM was added to the IV fluids; the child received this over the next twelve hours. By 12:30 a.m. his blood pressure had returned to normal and he was no longer comatose.

The following morning the child was still very lethargic. His vital signs were stable. More DFOM was obtained and an additional 4.5 grams were placed in the stomach; an additional 1.5 grams were given intravenously at 12 noon.

Serial irons were drawn on admission, fourteen hours, seventeen hours, and thirty hours after admission. The results are shown in Table 1. A second injection of DFOM was given intravenously twenty-four hours after admission. A twenty-four hour urine collection was begun for iron. Admitting CBC showed hemoglobin 14 gms; WBC 23,000 with polys 64%; bands 8%; lymph 18%; mono 8%; eos 2%; Baso 0%. Electrolytes were as follows: BUN 8 mg%; CO_2 25 mEq/l; Cl 101.0 mEq/l; Na 139 mEq/l; K 4.7 mEq/l. Urinalysis was within normal limits.

The second day of hospitalization the child was alert, crying, and hungry. His vital signs were stable; he passed a small benzidine positive stool. He was placed on anti-acids and milk feedings. It was noted that his urine had turned red-brown, but urinalysis was negative.

In the evening the child ate his dinner. From this time until his discharge on the ninth of April, he was asymptomatic. Total urine iron excreted during the first twenty-four hours of treatment was 16.8 milligrams.

Comment and Discussion

Desferrioxamine B, a sideramine, is formed by removing the iron molecule chemically from an iron (Fe+++) containing substance, Ferrioxamine B. Ferrioxamine B is derived from Actinomycetes. DFOM rapidly binds free serum iron with an affinity slightly greater than that of the iron-binding protein, transferrin. Therefore it is able to inactivate the ferric ion in excess of transferrin. This free serum iron is considered by some to be the cause of acute iron intoxication.[13] DFOM has been particularly effective in preventing iron poisoning in guinea pigs if given orally during the first 12 to 24 hours after administration of a lethal dose of ferrous salts.[14] Its safety has been shown by its use in the treatment of hemochromatosis and hemosiderosis in man.[14]

One molecule of DFOM binds one mole of Fe+++ ions to form a water soluble, reddish colored, ferrioxamine iron complex that can be excreted by the kidneys. Administered as the methanesulfonate salt, Desferrioxamine binds 9.3 mg of trivalent iron per 100 mg of chelate.

Since the iron-binding protein is normally only one third saturated, a serum iron level of

*Provided as Desferal by William F. Westlin, Jr., M.D., CIBA Pharmaceutical Co., Summit, N.J.

up to 500 gamma percent may presumably be tolerated following ingestion of ferrous sulfate tablets. Our patient's initial serum iron was three times this value. The administration of DFOM appeared to cause a rapid decrease in serum iron values with a corresponding sixteen-fold increase in the excretion of iron in the urine. The child's clinical state rapidly improved as the serum iron level fell to a safe range. The delayed shock phase never appeared. It is felt that the DFOM used in this case contributed greatly to the survival of this patient. The patient never returned for his upper GI examination six weeks after discharge; hence we could not evaluate the presence of any post-ingestion gastric scarring.

Our use of this compound was guided by the suggestions given in the article of Henderson et al[11] and this department's previous experience in iron poisoning.[10] The stomach first is emptied by the use of an emetic (syrup of ipecac 15cc) and lavage using a 0.9% solution of sodium bicarbonate. Before removal of the lavage tube, four to six grams of desferrioxamine are placed in the stomach. To the intravenous fluids containing glucose, 90 milligrams of desferrioxamine per kilogram of body weight are added to neutralize any absorbed iron. The dose of desferrioxamine may be repeated in twelve hours, either by IV or IM injection. Serial iron determinations are necessary to evaluate treatment. Anti-acids, plasma, blood, and antibiotics are indicated as supportive therapy to correct shock and infection. An upper GI examination should be performed in six weeks to rule out any gastric scarring. In the absence of DFOM, calcium versenate (EDTA) should be used in the dosage of 90 mg/kg, in divided dosages per 24 hours.

Summary

Desferrioxamine, a new iron specific chelating agent, was used successfully to treat a severe case of acute iron poisoning. It appears to be an ideal antidote. It is safe; it effectively binds intraluminal iron, presumably preventing its absorption from the intestine; and it binds free serum iron into a readily excretable, nontoxic compound. It should be available in all poison centers and hospital emergency rooms.

TABLE 1

SERUM IRONS AND COURSE OF TREATMENT.

Date	Time	Serum Iron*	Iron Binding Capacity*	Total Iron Binding Capacity*	Percent Saturation
4/2	7:00PM	Ingestion unknown quantity of Feosol tablets.			
4/2	10:15PM	1653	QNS	QNS	QNS
4/2	11:00PM	1 gram DFOM in 1000 cc IV fluids for 12 hours. 0.5 gms placed in stomach.			
4/3	12:05PM	1.5 gms DFOM given IV Stat over 15 minutes. 4.5 gms DFOM placed in stomach.			
4/3	2:00PM	413	QNS	QNS	QNS
4/3	5:00PM	372	128	500	74
4/7	9:00AM	98	262	362	27

*as gamma percent

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For many years the development of psychiatry was concerned with description and classification of the various symptoms without understanding or elucidating the underlying biochemical activity responsible for these symptoms.

TEN YEARS' PROGRESS IN PSYCHOTROPIC MEDICATION

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For a long time the effect of various drugs on the mind have been known; the temporary and permanent effects of alcohol, narcotics, barbiturates, the bromides have been well documented. The effects of rauwolfia serpentina have been known as long as a thousand years before Christ, but it was not until 1952 when Schlittler, Mueller, and Bein isolated reserpine from the whole root rauwolfia that the Western and European Worlds were awakened to the chemical concept of the psychoses.[2] However, as early as 1893, Alfred Werner advanced the comprehensive theory of "complex" or "coordination" compounds. This was the percursor of the chemistry of chelation and provides us with a better understanding of the chemistry of the psychoses.

In schizophrenic patients, there are reduced serotonin and epinephrine levels and increased xanthurenic acid and ammonia levels. Psychotropic drugs exert regulatory action on these metabolites, the oxidases, and the plasma copper levels essential for their production. It can therefore be deducted that two other types of organic psychoses exist; one, the result of excess oxidative deamination and the other a result of excess transamination, deamination being the removal of the amino acid group (NH_2) from amine body, transamination being the transfer of an amino group from amino acid to keto acid, forming a new amino acid and keto acid without liberating ammonia.[1]

Phenothiazines

In 1954 we began the use of phenothiazines, which are effective in the neuroses and psychoses particularly in schizophrenic patients. These agents stimulate the thalamus which is con-

cerned with transmission of alerting impulses to the cortex and modulation of action of the reticular formation which is recruitment, and is concerned with alerting and behavior. They also stimulate the limbic system whose function correlates emotional and intellectual aspects of consciousness. In addition, the phenothiazenes depress the hypothalamus which regulates the autonomic functions, correlating them with motor activities, and they also block the neural hormones which regulate affective behavior.

Our first study with chlorpromazine (Thorazine) was begun in 1954 when it was given in dosage range from 225 mg. to 1800 mg. daily to 350 psychotic patients.[2] At this time the oral and parenteral form was used because there was no concentrate. The author administered the parenteral ampules mixed in fruit juice orally, giving it to those patients who refused oral medication. Since then the concentrate has been provided. The principal side-effect at this time was dermatitis and photosensitivity. 4.1% of the 350 patients showed a complete remission of symptoms. Experience has proven since this early study that higher dosage would have caused many more complete remissions and betterment than was obtained by the small dosage then given. In the several thousand patients receiving chlorpromazine since this early study, no liver damage was noted. One patient developed jaundice, was taken off the chlorpromazine, and when the jaundice cleared up was reinstated on her former dosage and did not develop jaundice, proving that the jaundice was due to some other cause than chlorpromazine.

The author is still seeing patients who have been on chlorpromazine since 1954. One patient had been in the State hospital for 12 years, receiving shock therapy for assaultiveness, delusions, hallucinations, untidiness. She was begun on chlorpromazine and improved markedly; within a year she was sent home where she has remained since that time. Several times during this 10-year period, she has ceased to take her medication and has again developed disinterest in her personal affairs and in her surroundings but has not become assaultive as she formerly was, but as soon as she is reinstated on her medication, which at the present time is 50 mg. of chlorpromazine, 4 times a day, and perphenazine, 4 mg. four times a day, she remains in a normal condition. Her three daughters who were small children while she was in the hospital are now grown and are all in college—one of them is married. She is interested in social affairs, in her household, and is meticulous.

Another patient on chlorpromazine for 10 years is a woman whose mother and brother were psychotic and who married into a prominent family. For two years before hospitalization she kept her children in their home, would not allow them out of the house until she was taken to the State hospital. Her husband, a very permissive man, did not interfere with her harsh and psychotic treatment of the children. People passing by on the street could hear her berating them. She was delusional, hallucinated, received much shock treatment during her first years in the hospital and improved somewhat but her affect remained blunted and she was somewhat arrogant and had false ideas of her own importance. When chlorpromazine was first available for use, she was begun on 50 mg. q.i.d. She soon became interested in work activity and, being a secretary, was brought to the author's office to help with the secretarial work. Her family had not been to see her for 4 or 5 years because of her arrogance when they visited her. As she improved, they were written to come and see her. The husband was loathe to do so because of the bad effect their visits in previous years had had on the children, and the children did not wish to see her at all because of the treatment she had accorded them during the two years of their incarceration in their home. It took considerable persuasion before her husband would take her home on a trial visit. She has been home since that time. She continued to take her medicine for several years but about two years ago she quit taking it and her paranoid ideation and arrogant behavior returned. Her daughter who was in college at this time wrote the author and asked her to see the patient. When she came to the office, she was talkative, had no insight into her present or previous behavior and was using extreme methods in controlling her children. Her oldest son had been married at this time; the youngest son was threatening to leave home because he could not stand the pressures under which he lived. She was again put on chlorpromazine and returned to normal.

Perphenazine (Trilafon), another phenothiazine effective in the neuroses and psychoses,

was investigated over a two-year period. 323 patients were selected at random from 8 cottages of a 4,500 bed psychiatric hospital. The patients were all chronically ill women. Schizophrenic reaction constituted 75% of the group. All four Kraepelinian types were represented.[3] The duration of mental illness in this group was from 6 months to 50 years.

The conclusions of this two-year study was that the behavioral effect of perphenazine is marked. 81.5% of the patients showed some degree of improvement; side effects were mild, occurring in 15% and were amenable to dosage adjustment. Tremors of the extended hands and the muscles about the mouth occurred but no Parkinsonism was noted because when side effects such as excessive drowsiness, motor restlessness, and dystonia were observed, the medication was reduced. Dosage ranged from 16 mg. to 96 mg. daily. Since this drug has a high milligram for milligram potency, it's therapeutic index is most satisfactory. Perphenazine is especially beneficial in depressions, retarded states, and catatonia.

As more phenothiazine derivatives were synthesized, studies were completed on them. In 1957 the study of prochlorperazine (Compazine) in 180 chronic psychotic patients gave the information that 9% had complete remissions, 20% were greatly improved, 36% were considerably improved; no change was noted in 33%. Side reactions were present in 17% consisting of drooling, akathisia, contraction of the neck muscles, pseudo-like catatonic syndrome, and precordial pain.[4]

As early as 1957 the beneficial results of combined therapy were noted. A paper published in 1959 on the results of prochlorperazine indicates the effective of combined treatment; "a combination of chlorpromazine (Thorazine) and prochlorperazine (Compazine), as well as combinations of prochlorperazine with perphenazine (Trilafon), trifluprom azine (Vesprin), thiopropazate (Dartal) appears in many patients to provide greater benefits and fewer side reactions, proving their synergistic action clinically." Fluphenazine (Prolixin) and thioridazine (Mellaril) also have proven to be effective antipsychotic agents. The dosage of thioridazine is comparable to that of chlorpromazine. It has possibly fewer side reactions but also is not as effective an antipsychotic agent as chlorpromazine, but frequently can be used in conjunction with other phenothiazines for more effective results and fewer side reactions.

RESULTS		
Number of patients		180
Average age		55
Hospitalized		2 months to 35 years
Time of the study		18 months
Daily dosage		40 to 200 mgs.
Average blood pressure before		134/73
Average blood pressure after		130/87
Full remission		9%
Greatly improved		20%
Considerably improved		36%
No change		33%
Side reactions		17%
Syncope	2%	
Drooling	1%	
Dystonia—bucca-nuchal	1%	
Extrapyramidal symptoms	6%	
Gastric distress	2%	
Weakness	3%	
Precordial pain	2%	

In 1955 my first study of meprobamate (Miltown) in neuropsychiatric patients began with 300 psychotic patients.[5] All of these patients had had electric shock or insulin shock treatment. Four of them had been lobotomized. Of these 300 patients, 9 had a complete remission, 104 were greatly improved, some improvement was shown in 139, and no change was observed in 49. Side effects were minimal, mainly drowsiness. The dosage ranged from two 400 mg. tablets daily to ten 400 mg. tablets daily. Meprobamate (Miltown) depresses the thalamus whose function it is to transmit alerting impulses to the cortex and it depresses the limbic system which correlates emotional and intellectual aspects of consciousness. This is in direct contrast to the stimulating effect of the phenothiazines.

Another study of meprobamate (Miltown) and pre-menstrual tension in 1956 following a survey of 1500 females past the menarche gave the information that 95% of the group had premenstrual symptoms among the white patients and 93% of the colored patients. Forty-two women between the ages of 16 and 42 had premenstrual tension and primary dysmenorrhea since the menarche.[6] The investigation covered a 12-

months' period. Twenty-eight of these patients were instructed to begin taking meprobamate, 400 mg. at the first premenstrual symptoms and continue taking one tablet after each meal until their symptoms subsided. Medication was then discontinued until the next period when the symptoms recurred. Fourteen patients were instructed to take meprobamate after each meal daily for two months and then intermittently when premenstrual symptoms began. A placebo was stubstituted for meprobamate for one month in every case. It was decided that taking 400 mg. of meprobamate after each meal when premenstrual symptoms were present, and as long as they continued, was just as effective as taking it daily. Of the 28 women who were given meprobamate intermittently, 78% were relieved of their premenstrual symptoms. There was also marked improvement in family, social, and business relationships not only during the period when meprobamate was taken but between medication periods as well. Most of the group described their improvement to lessening of emotional tensions due to bettered sleep pattern induced by meprobamate. Forty-two percent were greatly benefitted but continued to have dysmenorrhea although in a lessened degree, and their headaches were much less disabling and work was accomplished with less discomfiture. Of the 14 taking meprobamate continuously, 78% were relieved of their premenstrual symptoms and 22% were considerably improved.

Because of its complete lack of toxicity and side effects when given in moderate dosage, meprobamate (Miltown) is considered to be an ideal drug for repeated use as in premenstrual tension.

Meprobamate (Miltown) has a strong anticonvulsant action, and it has a very wide margin of safety. The acute toxicity is very low. We had one patient who took sixty-four 400 mg. tablets of meprobamate with suicidal intention. She remained drowsy for two days and recovered without incident. Chronic toxicity of the drug is usually low.[7]

A comparative clinical study of meprobamate (Miltown) and chlordiazepoxide (Librium) was begun in 1960. One hundred and sixty-nine patients were given combined psychotropic medication with meprobamate.[8] Of this group, 83% achieved excellent results; 13% good results; 2% fair results; side reactions were 1%. Combined phrenotropic medication with chlordiazepoxide (Librium) in 132 patients gave 50% excellent results; 20% good results; 19% fair results; 9% poor results; 13% side reactions.

For a nine-year period, from 1953 to 1962, a comparative study of single and combined psychopharmaceutical medication was done on 2,350 patients. A summary of this work was that 2530 patients in 9 separate studies since 1953 were reported.[9] Side effects showed decreased percentages in multiple medication, possibly because smaller doses of side reaction producing agents were necessary and because of the ameliorating effect of meprobamate decreasing anxiety and bettering sleep. The conclusions were that multiple psychotropic medication appears to give the best results. The combination of meprobamate (Miltown), chlorpromazine (Thorazine), and nialamide (Niamid) in this study effected the greatest betterment. In the study of combined psychopharmaceutical treatment of the 635 patients, meprobamate was found to be an effective agent in 578 patients.

Antidepressant Agents

Analeptic agents began with the study of methylphenidylacetate (Ritalin) in 1956.[10] Two hundred male and female psychotic patients received methylpenidylacetate from 1 week to 12 months. Dosage ranged from 20 mg. to 160 mg. daily in divided doses. Methylpenidylacetate was also given in combination with phenothiazines. Of the patients receiving phenidylacetate, 20% were greatly improved; 38% were considerably improved; 27% showed side effects which were:

Hyperactivity	7%
Noisy assaultive conduct	7%
Chewy movements of the jaw, tongue and lips, also noted in animal studies done elsewhere	5%
Tremor of the facial muscles	5%
Oculogyric phenomenon	2%
Hypertension in less than in an arteriosclerotic patient	1%

Since many psychotropic drugs create drowsiness and lethargy, methylphenidylacetate (Ritalin) is useful in counteracting their symptoms

and is particularly helpful in alerting cerebral function and senile cerebral arteriosclerotic patients.

A combination of meprobamate and benactyzine (Deprol) is an effective antidepressant in the neuroses and in combination with a phenothiazine in the psychoses.

Previous studies with meprobamate and benactyzine had shown their value in single usage; a study combining these medicaments in 135 patients with depression showed 12% greatly improved, 30% considerably improved, and 39% slightly improved. Dosage ranged from 4 to 16 tablets daily; duration of treatment was 1 week to 17 months, average 1.8 months. Side effects were drowsiness 2.9%, syncope 2.2%, dizziness 0.7% restlessness 0.7%, dystonia 7%. The combination of meprobamate and benactyzine (Deprol) is a useful drug in depressions.

Monoamine oxidase inhibitors, including iproniazide (Marsilid), isocarboxazide (Marplan), nialamide (Niamide), phenelzine sulphate (Nardil), transylipromine (Parnate), and the anti-depressant imipramine hydrochloride (Tofranil) are useful in depressions which accompany in varying degree all anxiety states in the neuroses and schizophrenias as well as disorders of psychogenic origin.

Pargyline hydrochloride (Eutonyl) is a new monoamine oxidase inhibitor useful in depressions. Fifty-two hospitalized male neuropsychiatric patients, ages 26 to 67, with mild or moderate depressions and two with severe depressions received 25 to 100 mg. of pargyline daily from 15 to 64 days. The medication was discontinued in 16 patients because of orthostatic hypotension. It was concluded that pargyline is an effective mood elevator alone and in combination with perphenazine, chlorpromazine, plus meprobamate.

A most effective anti-depressant combination is perphenazine and amitriptyline (Etrafon).

In October 1962 a study with 72 patients was begun. Depression ranged from mild to severe, with suicidal threats and attempts in depressive reaction and alcoholism. The depth of the depression was assessed by the Minnesota Multiphasic Personality Inventory and clinical observation and examination. Liver function and other laboratory tests showed no adverse findings. Perphenazine dosage ranged from 6 to 32 mg. daily; amitriptyline from 75 to 200 mg. daily. Side reactions occurred in 6%, hypotension, motor restlessness, and mild dyskinesia, controlled by dosage. Improved were 89%; markedly improved 54%; considerably improved 20%; slightly improved 15%. The patients were in the study from 3 weeks to 3 months.

Because of these anti-depressant drugs, it has been found by many clinicians that shock therapy is no longer necessary. In combination with the phenothiazines and meprobamate, they are particularly helpful.

The use of psychotropic drugs and the marked benefits derived from them has created more research into the activities of the central nervous system than any other stimulus. The study of brain biochemistry has been undertaken and proof that it is suspect in nervous and mental ills is now becoming an almost universally accepted belief.

No other ten-year period has produced such a rapid turnover of patients in psychiatric hospitals, nor opened the doors for so many chronically psychotic patients. In a hospital whose daily population was about 4,300 patients, in 1952, 1,300 patients were discharged; in 1962, 2,700 were discharged, but the overall population remained 4,300, twice as many having been discharged in 1962 as were discharged in 1952 prior to psychotropic medication.

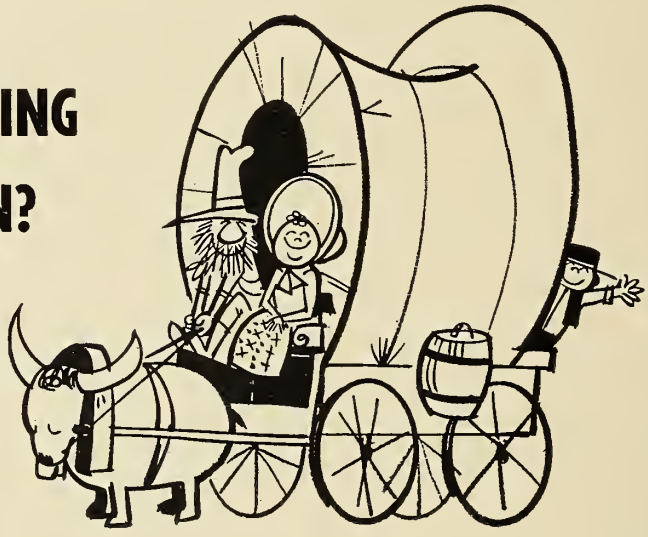
The thought that all higher behavior is the result of the organized activity of a brain working in its internal environment, in which a multitude of chemicals and a constellation of enzymes is basic to that behavior, has stimulated research in brain biochemistry, which, as Freud predicated, will solve the mystery of nervous and mental disease.

(References on page 558)

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METABOLIC ASPECTS OF NUTRITION AND THE HEART

F. A. Kummerow/urbana

An orderly metabolism of nutrients is essential to the life process and heart disease may represent a disruption of one or more aspects of this ordely process. In the normal metabolism of nutrients, the smallest denominator is represented by a two carbon unit known as acetyl coenzyme A (acetyl Co A); it can originate from the carbohydrates, proteins or fats in food through a well traced out series of *in vivo* reactions (Fig. 1). The carbohydrates, starch and sugar, are metabolized to a three carbon unit, pyruvate, which is converted to acetyl Co A by the loss of carbon dioxide and addition of coenzyme A with the aid of various enzyme systems.[1] The conversion of the individual amino acids in proteins to acetyl Co A involves as complex a series of enzyme systems as those involved in the conversion of carbohydrates to acetyl Co A. Dietary fats which contain a straight chain of fatty acids four to twenty-two carbon atoms in length are also broken down into the two carbon acetyl Co A.[2]

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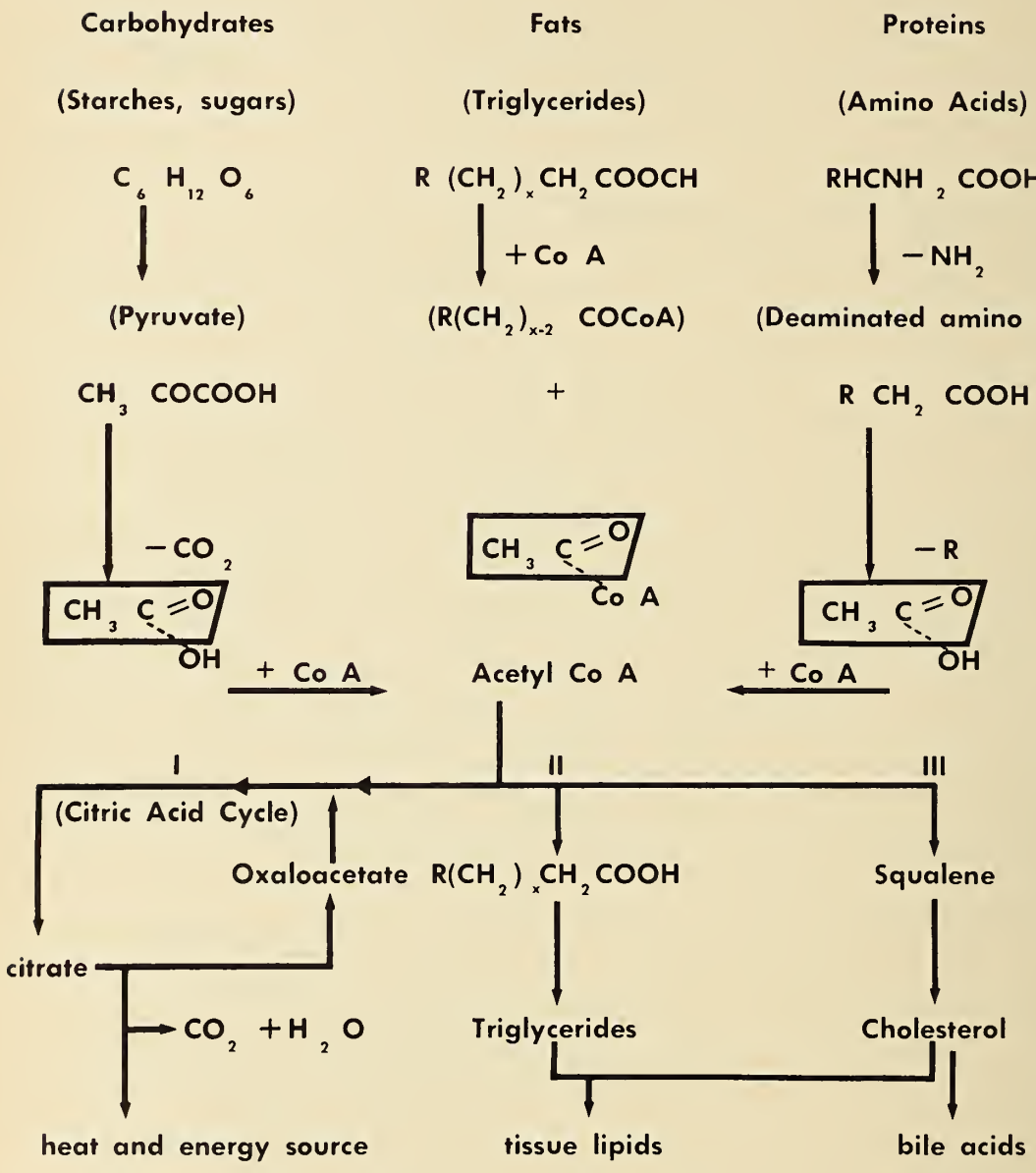
Presented at the Conference of Nutrition and the Heart, February 27, 1964, sponsored by the Illinois State Medical Society and the Illinois Heart Association.

The "metabolic pool" of acetyl Co A does not exist as such but is in a continuous state of flux. Furthermore an excessive intake of a low fat diet will add to the metabolic pool of acetyl Co A as readily as an excessive intake of a high fat or a high protein diet. If the dietary intake of metabolites is just sufficient or an excessive intake is metabolized in the citric acid cycle to produce heat and energy through the use of muscles (I), the conversion of acetyl Co A to fatty acids (II) and cholesterol (III) would be minimal. However, if the total caloric intake is in excess of energy and maintenance requirements, acetyl Co A is converted to fatty acids and cholesterol. The major portion of the excess cholesterol is converted to bile acids in the liver and excreted. The fatty acids are deposited as triglycerides and along with cholesterol, phospholipids and other lipids add to the unwanted deposits of tissue fats. It is therefore essential to balance the energy requirements against total caloric need in order to prevent an accumulation of tissue fats. The adipose tissue fat and serum cholesterol level can be reduced by increasing energy expenditures or by decreasing caloric intake. However, the obesity problem, the relatively high serum cholesterol levels and the high mortality rate from heart disease in Americans all attest to the fact that it is difficult to carry an orderly metabolism of nutrients in an atmosphere of dietary abundance.

The role of dietary fat in heart disease has taken on an increased interest for three reasons. One, dietary fat has approximately twice the caloric value of an equivalent weight of carbohydrate and as fat consumption has increased from 32 to 41% of total calories from 1910 to 1964 dietary fats are mainly responsible for the

Figure 1

Metabolic Fate of Carbohydrates, Fats and Proteins in Food*



*Digested food, partially metabolized is stored as glycogen, fat or tissue protein.

$CH_3 C=O$ — Acetyl group, a common building unit derived from all three major food components.

obesity problem. Two, the large deposits of lipid (fat and cholesterol) in the involved areas of the intima (atherosclerosis) points to a direct relationship between faulty lipid metabolism and heart disease. Three, clinical studies have shown that the excessive consumption of oils which contain polyunsaturated fatty acids lower serum cholesterol levels and as serum cholesterol levels have been linked with heart disease in the public mind the daily intake of "polyunsaturates" has taken on nutritional significance.

No chemical distinction actually exists between fats (shortening) and vegetable oils (salad oils); both contain glycerol connected to or "esterified" with three moles of fatty acid. The saturated fatty acids in the common edible fats, which vary from C_4 to C_{22} in chain length, have melting points of −7.9 to 79.9° C respectively. The unsaturated fatty acids in edible fats vary from C_{16} to C_{20} in chain length and −1 to −49° C in melting point.[3] The high melting points of the saturated and the low melting points of the unsaturated fatty acids are important to the physical characteristics of fats and oils.

If the glycerol is esterified with more than two unsaturated fatty acids, i.e., oleic or linoleic acid, the resulting triglyceride is a liquid or an "oil" at room temperature. If, on the other hand, glycerol is esterified with only long chain saturated fatty acids or only one mole of oleic and two moles of palmitic or stearic acid, the resulting triglycerides is a solid or "fat" at room temperature. A study of isolated triglycerides has shown that the substitution of one mole of oleic for stearic acid in an α-position in tristearin for example lowers the melting point from 73 to 38° C and the same substitution in tripalmitin from 66 to 35° C.[4] When one considers that the body temperature of a human being is 37.2° C, the *in vivo* substitution of linoleic or oleic acid for one mole of stearic or palmitic acid may change the physical character of the depot fat and its ability to act as a "cushioning agent" to vital organs.

The ability of unsaturated fatty acids to form "geometric isomers" may also play an important role in the degree of hardness of human depot fats. Geometric isomers are important to the hardness of fats because the *trans* isomers of oleic and linoleic acid, which are produced during the commercial hydrogenation of an edible oil have melting points 38° and 41° C higher than the respective *cis* isomers. Although the *cis* and *trans* isomers have the same degree of unsaturation, this property of oleic and linoleic acids to exist in either a solid or a liquid state at room temperteure is important to the production of margarines of high linoleic acid content.

TABLE 1

COMPARATIVE COMPOSITION OF MARGARINES

Fatty Acid	M39¢	F39¢	A29¢	E17¢
Palmitic	14.7%	16.2%	9.4%	11.7%
Stearic	7.3	9.3	5.1	13.0
Total sat.	22.3	25.7	14.8	25.0
Oleic	41.7	43.4	73.3	47.5
Linoleic	35.4	30.2	10.8	25.8
Total unsat.	77.1	73.6	84.1	73.3
Total "trans"	28.7	19.6	43.6	48.6

We purchased four typical brands of both high and low priced margarine at a local supermarket and subjected them to fatty acid and infrared analysis (Table 1). The results[5] indicated that all of them contained more linoleic acid than the margarines which were available a few years ago[6]. Furthermore, the cost of these margarines was independent of their linoleic acid content; the lowest priced margarine contained 15% more linoleic acid than the medium priced brand and only 5% less linoleic acid than the highest priced brand. The large amount of "trans" fatty acid in all of the margarines indicated that both trans oleic and trans linoleic acid may have been produced during the hydrogenation of soybean oil, which forms the base stock of most margarines.

The trans fatty acids present in human tissue apparently arise solely from dietary fat, and as in rats, they do not normally appear in the tissues unless a source of trans fatty acids is included in the diet[7]. Although the iodine value of such depot fat would indicate a higher P/S ratio, it seems evident that the high trans fatty acid content of margarine fat could "harden" human depot fat and counteract the "softening" influence of linoleic acid. The melting point and other physical characteristics of the depot fat might not be changed significantly from a depot fat which contained stearic instead of trans oleic acid, that is someone eating butterfat instead of margarine.

The glycerides of human adipose tissue contain approximately 4% myristic, 25% palmitic, 7%

stearic, 6% palmitoleic, 46% oleic and 2% of fatty acids which are shorter than 14 or longer than 18 carbon atoms in chain length[8]. These fatty acids may be classified the "non essential fatty acids" as they can all be synthesized in the body from non fat precursors. They are also found in corn oil, beef tallow and lard but in different percentage composition in each case. In addition adipose tissue is composed of approximately 9% linoleic and 1% arachidonic acid which contain two and four double bonds respectively. These two polyunsaturated fatty acids have been classified the "essential fatty acids" as linoleic acid cannot be synthesized by animal tissue and serves as an essential precursor for the synthesis of arachidonic acid. However, the excessive consumption of dietary sources of essential fatty acids will contribute to the "metabolic pool" of acetyl Co A as effectively as an excessive consumption of animal fats.

The fat soluble components which pour into the blood via the lymph are combined with protein during their passage through the liver and are known as lipoprotein[9]. The protein portion of these lipoprotein acts as a "helping hand" in which the fingers of the hand are available for the attachment of the triglycerides and other fat components such as phospholipids, cholesterol and cholesterol esters. It is possible that in atherosclerosis, subtle changes tend to "curdle" or denaturate the protein so that it is no longer able to "carry" in the serum the different classes of fat components in a normal fashion. The exact steps that are involved in this denaturation process and whether they are important to atherosclerosis are still to be elucidated.

Summary

Dietary fats represent the most compact food energy source available to man. However, both cholesterol and tissue fat can be synthesized from either carbohydrate or protein. Furthermore, the total caloric intake rather than any one dietary component is crucial to the amount of deposition of these lipids into the tissue.

Until the entire picture of the role of serum cholesterol and dietary fats in heart disease is clarified, it would seem judicious to consume a well-balanced diet of meat, milk, eggs, vegetables, fruits, and sufficient cereals and bread to provide for an adequate protein, vitamin, and caloric intake. Although the optimum total intake of linoleic acid by man has not been established, the level of linoleic acid in the American dietary pattern could be increased through the availability of less severely hydrogenated shortenings. However, the indiscriminate dietary substitution of "soft" for "hard" fats seems undesirable.

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The View Box

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital



Figure 1

This 78-year-old female entered the hospital with complaints of intermttent epigastric pain and vomiting of two weeks' duration.

Physical examination revealed a loud apical systolic murmur and an increase in cardiac diameter. The abdomen revealed mild tenderness over the epigastrium.

What is your diagnosis?
(We give you no alternatives this month.)

(Continued on page 566)

SOME SKIN AIDS IN THE DIAGNOSIS OF VISCERAL DISEASE

Leon Goldman, M.D., / cincinnati, ohio

There Are Certain Fundamental requirements for proper examination of the skin so that the physician may see not only what he knows but, surprisingly sometimes, what he doesn't know. If the eruption is endogenous, the entire area must be examined in order to find the primary type of lesion, the influence of such environmental factors as heat, rubbing of clothing, scratching, etc., or the influence of such factors as stasis on eruption of the lower legs. The vascular dynamics of stasis often transforms a simple macular or maculopapular eruption into petechial and even purpuric reactions. Proper lighting must be assured in order not to cover up the red qualities of the skin eruption. Such simple devices as magnifiers of moderate magnification will often help to show those spots which may not be particularly clear, especially to those who have presbyopia. For investigative procedures, stereobinocular skin microscopes are used to examine the surface of living skin.

In order to determine how deep the redness is or where there is hemorrhage, or whether pigmentation is superficial or deep, a simple device, such as a diascope, is used. This is a very impressive name for a little piece of glass or plastic which can be used to press out most of the color of the skin. If there is superficial vasodilatation, this diascope may serve to make the skin paler. If the dilatation is deeper or concerns a deeper plexus, there may not be a significant change in color. The differentiation between petechial hemorrhage and dilatation can be done then if the lesion be located superficially.

After these simple measures of physical diagnosis are done, then such procedures may be used as scraping of the skin for examination for fungi or bacteria and examination of cytological material for evidence of nuclear disturbance such as may be associated with viral parasitism. Then a skin biopsy may be done. New technics with tiny knives and tattooing of material minimizes scarring from such biopsies. The selection of cytological and biopsy material of the lesion requires experience in order to determine the proper area for testing. As usual, it is very difficult to evaluate negative results.

After these things are done, what help can one have in the examination of the skin for systemic or visceral disease?

To proceed in chronological fashion, one must consider certain diseases in certain age periods. Persistent generalized non-inflammatory disorders may indicate genodermatoses which are associated with metabolic disturbances, such as, amino acid disturbances or disturbances of lipid metabolism. If widespread lesions of crusted petechial or purpuric type are found, then these lesions may be indicative of leukemic or leukemoid states, such as, Letterer-Siwe disease or leukemia. Angiomas may be associated with thrombocytopenia (Kasa-

From The Department of Dermatology of the College of Medicine, University of Cincinnati.

TABLE 1

Some Specific Hemorrhagic Types of Visceral Disorders

1. Hemorrhagic crusted lesions, neck & scalp—in infancy—Letterer-Siwe
2. Painful single localized necrotic hemorrhagic areas —bites of venomous arthropods and snakes electric burns
3. Splinter hemorrhages, nailbed—lupus erythematosus subacute bacterial endocarditis
4. Petechial with spotted small angiomas— senile angioma-vascular fragility complex bartonellosis with early verruga peruana
5. Non-traumatic abdominal wall and flank hemorrhages
   A. Greenish-blue (Grey-Turner sign) retroperitoneally extravasated pancreatic juice
   B. Red or brown types—small bowel obstruction bowel strangulation ruptured intra-abdominal aneurysm

bach-Merritt Syndrome), visceral involvement as liver, brain (Von Hippel-Lindau, Sturge-Weber Syndrome) and various cartilage and bone disturbances (Maffucci's Syndrome).

In childhood, the development of non-inflammatory, asymmetrical patterns may indicate tumor formation. These may be associated with visceral tumors. The development of yellowish spots, again, indicate disturbances of lipid metabolism. Pruritus without any primary skin lesions may suggest systemic disturbance such as diabetes, Hodgkins, etc. Developing pigmentation and hemorrhagic states mean an extensive examination of the individual.

In the adult, the general color of the skin may be important as regards anoxemia, anemia, pigmentations of various types or depigmentation. The psyche of the patients may be assessed

TABLE 3

Some Systemic Aspects of Angiomas and Telangiectasia

Infancy:	Multiple types—with visceral angiomatosis
	(Liver—Von Hippel-Lindau)
	(Brain—Sturge-Weber syndrome)
	with thrombocytopenia and afibrinogenemia
	(Kasabach-Merritt syndrome)
	with Maffucci's syndrome —dyschondroplasia
Adults:	Congenital familial hereditary telangiectasia
	(Rendu-Osler-Weber syndrome)
	With visceral involvement
	With capillary fragility
	Association of senile angiomas with aortic calcification and arteriosclerosis (??)

TABLE 2

Cutaneous Phases of the Malignant Lymphomas

1. Non-specific reactions
   1. Pruritic
   2. Papules—often pruritic—bullae, urticaria
   3. Erythema multiforme
   4. Exfoliative dermatitis
   5. Petechial and purpura
   6. Hyperpigmentation
   7. Herpes zoster
2. Specific
   1. Papules
   2. Nodules
   3. Tumors
   4. Placques
   5. Ulcers
   6. Erythrodermas

by such factors as pallor, hyperidrosis, flushing, pompholyx and excoriations of varying degrees and intensities. The vascular fragility as reflected in petechiae or purpura may be regional or generalized. On the lower legs these may be the first indications for consideration of the various groups of macroglobinemias. Diffuse spreading pigmentations may indicate Addison's disease, hemochromatosis or visceral toxicity. Nodular non-inflammatory lesions may be indicative of lymphoma. Certain diseases in the adult life have certain predilection, like the small, non-inflammatory, yellowish papules of sarcoidosis about the face and eyes. The characteristics of drug eruption are often difficult to evaluate as far as etiology by casual inspec-

TABLE 4

Reactions Which May Suggest Psychic or Emotional Disturbances

1. Pallor
2. Skin flushing— consider also carcinoid
3. Hyperidrosis
4. Pompholyx
5. Excoriation
6. Urticaria

TABLE 5

Some Systemic Aspects of Some Granulomas . . .

Modern syphilis	= Neuro- cardiac
Systemic mycoses	= Pulmonary especially
Sarcoidosis	= Glandular—Pulmonary
Tuberculosis	= Glandular, pulmonary, bone, etc.
Hansen's disease (leprosy)	= Neural, amyloidosis, etc.
Reiter's disease	= Polyarthritis, gastritis

TABLE 6

Porphyrias (Modified After Watson-Rattner)
1. Marrow—congenital erythropoietic
2. Hepatic
A. Acute intermittent
B. Porphyria cutanea tarda—hereditary
C. Porphyria cutanea tarda—acquired
3. True mixed
4. Latent

tion. The significant thing about drug eruptions is its visceral components as regards hematopoietic and hepatic reactions. Therefore, the hemorrhagic quality to a drug eruption should call attention to the possibility of disturbances in the hematopoietic system.

With the multiplicity of pictures which may develop from the relatively few fixed structures in the skin, the varied diagnostic hints suggested may be presented in tabular fashion. Tables and charts oversimplify usually, but at least they may give some hints as to what disorders should be considered and should suggest much more detailed investigation.

TABLE 7

Diabetes
1. Metabolic—
A. Pruritus
B. Acanthosis nigricans
C. Necrobiosis lipoidica
D. Xanthoma
F. Lipodystrophy
2. Associated infections—
A. Pyodermas
B. Moniliasis
3. Reactions to therapy—
A. Insulin allergy
B. Lipodystrophy

TABLE 8

Lipoidses
1. Normocholesteremia
A. Xanthelasma
B. Xanthogranuloma
C. Histiocytosis X
2. Hypercholesteremia
A. Essential familial
B. Chronic hepatobiliary disorders
C. With myxedema
3. Hyperlipemic
A. Idiopathic
B. Von Gierke's disease

Summary

The proper training in the examination of the skin, performance of proper examination of the skin, some background in understanding the pictures developed and evolved may help in the use of the skin as a diagnostic tool for systemic and visceral disease.

TABLE 9

Cutaneous Aspects of the Physiologic, Primary or Secondary Macroglobulinemias
Petechial
Ecchymosis
Spider Angiomata
Raynaud's phenomenon

The View Box

—diagnosis and discussion

(Continued from page 563)

Diagnosis: Mitral annulus calcification.

The roentgen appearance of calcified mitral annulus is diagnostic. It is usually a C-, J-, or U-shaped calcification which is seen to the left of the dorsal spine, about midway to the left heart border. In the lateral, it will be noted at the posterior one-third of the heart shadow. The valve when calcified is smaller, nodular, and appears as leaflet calcification.

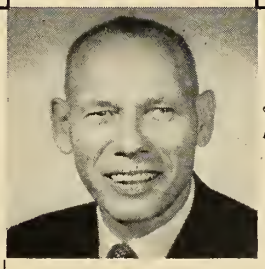
Calcification of the annulus is not uncommon in aged females, and is usually on the basis of arteriosclerosis rather than rheumatic heart disease. It may be associated with murmurs of mitral insufficiency and/or stenosis. Heart block may be expected when the calcification extends into the septum.

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MEDICINE
IN THE OUT OF DOORS



Julius M. Kowalski, M.D., Princeton

PROTECTION FROM MISERIES OF COLD AIR AND WIND

He was all sportsman, summer and winter. For him, there was no greater thrill than hovering close in a duck blind, scanning the chilled horizon for a flight of emerald-headed mallards. Perhaps the only experiences to match it were long treks over some frozen pond to a favorite ice fishing spot or tracking rabbits through a layer of freshly fallen snow.

Yet, for the past five years—after he had developed severe emphysema—he could only dream of these exploits from the warm confines of his den. Even the shortest exposure to one of winter's icy blasts caused severe shortness of breath, cough and aggravation of his chronic lung condition.

He was a prisoner of cold winds and weather.

Unfortunately, thousands of persons—including avid sportsmen—share this same lot every winter. Stricken with such cardio-respiratory ills as coronary insufficiency, asthma, emphysema, sinusitis and cold allergy, they suffer immeasurable distress everytime they set foot outside in low temperatures. Some of them who choose to brave the distress frequently suffer serious and even near-fatal complications.

The consequences of this intolerance to cold air are much more serious than frustration for the active sportsman. Each year, this problem costs American industry millions of dollars in absenteeism. It also forces hundreds of thousands of children to miss so much school during the winter months that their academic progress is seriously impaired.

Just why cold air causes such crippling effects in susceptible persons has been the subject of intensive medical research for many years. The armed forces, as well as industry, have taken a special interest in an effort to keep manpower at optimal efficiency regardless of weather conditions.

The key to the problem was uncovered only recently in a study of angina patients, who are

especially sensitive to winter temperatures. Even when they do NOT have an attack, studies showed that cold air produces certain electrocardiographic changes in angina patients which are not producible in normal subjects. These changes are caused by the natural tendency of cold air to constrict the blood vessels.

Having determined this relationship, one problem remained for medical scientists: Did INHALATION of cold air, or merely EXPOSURE to it, precipitate the anginal attacks? The answer came when further studies showed that anginal pain could be precipitated no matter how warmly the patients dressed in cold weather—AS LONG AS THE NOSE AND MOUTH REMAINED EXPOSED.

Based on these observations, it has been proven that the reflexes which bring on attacks of cardio-respiratory conditions in cold air originate in the receptors of the upper respiratory tract. This clue became the basis for a logical solution to the problem of the sportsman—or anyone else—unable to tolerate winter's chilling winds and temperatures. It is a face mask that covers the mouth and actually preheats cold air BEFORE it is breathed in.

A pioneer in this field is Louis A. Terman, M.D., a Chicago internist at Columbus Hospital who for years has worked to ease distress in his patients. The mask he has developed has proved a welcome addition to the medical armamentarium. Made of knitted, washable cloth, the mask is heated by an heating element which is powered by a small, rechargeable nickel-cadmium battery worn in the patient's coat or pocket. Heating the pre-inspired air to a comfortable 65 degrees, the unit can be used for three and a half to five hours without a battery recharge.

The development of a face mask for cold air is receiving increased attention by industry since Dr. Terman's work. Minnesota Mining and Manufacturing of St. Paul, Minnesota, recently has marketed a cold weather mask made of several layers of rinsable, non-woven synthetic fiber. Unlike the electrically heated mask, the 3M product is discarded after several wearings.

To date, thousands of persons have worn both types of masks through several winters. Of these, the manufacturers report that a significant percentage have achieved new freedom from cold air distress. Once again, many sportsmen stricken with asthma, angina, emphysema or bronchitis are able to watch or participate in their favorite winter pastimes without consequence. Many persons who have had to turn down jobs as policemen, mail carriers, meter readers and construction workers are again able to make the living of their choice in relative comfort. Even children who formerly were "cold air cripples" because of asthma, bronchitis and other chronic lung respiratory ailments are now able to romp and play in the snow with other kids.

According to the manufacturers of the electrically heated mask, the effectiveness of their product is not confined to persons with chronic heart and lung problems, but to anyone who suffers discomfort from cold wind and weather.

Paramount in this latter group are a large number of individuals who actually exhibit an allergic sensitivity to cold air. Whenever exposed to cold air and forced to breathe it, they release histamine in sufficient amounts to trigger severe allergic reactions such as asthma, bronchitis and rhinitis.

While results in all of these patient groups have been heartening, the manufacturers warn that heat masks are not a CURE for the underlying conditions affected by cold air—but they DO eliminate the distress caused by inhalation of cold air and wind. In this way, they reduce the chances of an incapacitating attack during cold weather and greatly increase the patient's comfort and feeling of assurance.

The heat masks certainly will gain attention and may be mildly embarrassing to a sensitive individual at first. However, not many years ago so were horn-rimmed glasses, hearing aids and metallic bands on the teeth. These health aids are now commonplace and are accepted in every part of the country. Wearing a mask outdoors in cold weather will soon be no more conspicuous than any other visible health aid. What's more, it will give sportsmen—and anyone else who is a "cold air prisoner"—a new key to freedom and enjoyment in the great outdoors, even in forceful winds and frigid temperatures.

Cite New Cause of Polycythemia Vera

Two University of Chicago medical researchers recently reported polycytheima vera is not caused by the unchecked production of a hormone, as had seemed likely. Instead, they suggest that the disease may be caused by an aberrant type of primitive cell which matures into blood cells without the hormone stimulation this process normally requires. They also put forward a speculative theory to explain how the administration of radioactive Phosphorus-32 may trigger a complicated sequence of events which results in long-term remission of the disease. The reporting specialists are Drs. Richard L. DeGowin, Research Assistant, and Clifford W. Gurney, Associate Professor, both of the Department of Medicine of The University of Chicago.

Gurney and DeGowin base their conclusions on controlled laboratory tests and clinical observations of four cases of polycythemia vera, in addition to their continued care and study of more than 100 chronic polycythemia vera sufferers who are treated periodically at The University of Chicago Hospitals and Clinics. This patient population constitutes one of the largest treatment groups in the nation for this rare ailment.

The University of Chicago scientists learned, during treatment and close observation of the four selected patients, that what seems to be a temporary remission of polycythemia vera after blood-letting actually is a respite in over-production of red cells caused by a deficiency in iron. In this unusual instance, therefore, one disease may be controlled by the production of a deficiency which constitutes a less severe disease state.

This finding explained one of the clinical peculiarities of this baffling disease. The next step was to determine what role, if any, hormones play in polycythemia vera.

The process begins with so-called stem cells. Normally these primitive cells mature and differentiate into whichever of the three types of cell is in short supply. Not much is known about the process of cellular differentiation, but Gurney and DeGowin predict that advances will be made by biochemists and geneticists in the next few years which will contribute substantially to the understanding not only of polycythemia vera, but also leukemia and other severe hematological disorders.

But it is established that the hormore erythropoietin stimulates stem cells to differentiate into red cells. And there is reason to believe that other specific hormones stimulate the production of white cells and platelets.

Erythropoietin is produced whenever the oxygen content of the blood drops below normal, signaling a shortage of red cells. Excess production of red cells would seem then to indicate that erythropoietin production is not shutting down as it should when blood oxygen rises to an adequate level.

DeGowin and Gurney discovered, however, that the most sensitive biological tests do not detect the presence of this hormonal regulator in the blood plasma of plethoric polycythemia vera patients. They cannot be positive that erythropoietin is totally absent, because present laboratory assay techniques are not overly precise. But it appears likely that spontaneous, unregulated stem cell differentiation occurs in the absence of specific (hormone) regulators.

The University of Chicago scientists may thus have narrowed the area of the unknown regarding the cause of the disease. Ultimate cure, if a cure proves possible, depends on finding out why the stem cells differentiate and mature into blood cells without hormone stimulation.

"It is surprising," they commented, "and somewhat frustrating to realize that a disease seemingly so simple in pathogenesis and susceptible to a variety of therapies constitutes such an enigma."

Gurney and DeGowin turn then to the treatment of polycythemia vera, which involves other enigmas.

After phlebotomy, the standard treatment for a plethoric patient, certain drugs help keep overproduction of new blood cells in check for varying periods. Long-term remission can be achieved in many cases if the drug used is radioactive Phosphorus-32.

Why? What does P-32 do to inhibit overproduction of blood cells, without materially affecting the body's ability to produce replacement cells for those which die off in normal course?

DeGowin and Gurney suggest this hypothesis:

Suppose a colony of stem cells arises that is genetically different from the remaining primitive cells, and perhaps because of its greater mitotic (cell division) activity, or rate of turnover, it is more sensitive to radiation.

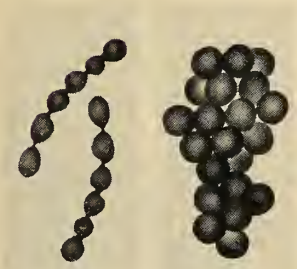
These mutant cells, the investigators speculate, do not need hormone stimulation to mature and differentiate. They produce all the blood cells the body needs, and more. The production of blood cell hormones stops. The normal stem cell colony, no longer stimulated by hormones, becomes dormant.

"Perhaps dormancy confers some degree of preferential protection on the normal stem cells," Gurney and DeGowin suggest. Radioactive P-32 eventually destroys nearly all—but not quite all—the aberrant, runaway cells. New blood cell production stops. The oxygen blood level drops, and the body starts producing blood cell hormones again.

This stimulates the dormant normal stem cells, which had escaped major damage from P-32. The patient enjoys a prolonged relief from plethora until the few surviving aberrant cells establish a new colony and "once again usurp dominance."

New treatment with P-32 could again set in motion this chain of events which serves to keep polycythemia more or less permanently under control. Gurney and DeGowin caution that their hypothesis, "while designed to fit the meager clinical observations of the nature and course of polycythemia as we now know them, is highly speculative."

If it is correct to any degree, they believe that ultimate understanding of the disease will come from a detailed presentation of the phenomenon of cellular differentiation, the genetic mechanisms of its control, and the uncovering of abnormalities of this process.



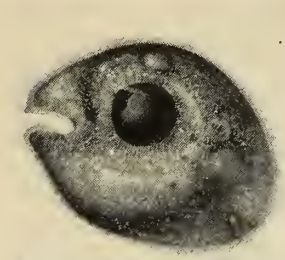
Streptococci Staphylococci

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Balantidium coli

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IMJ EDITORIALS

Control of Post-Prostatectomy Bleeding

Immergut[1] widened the scope of local hypothermia to include bleeding from the prostate gland. Preliminary studies on cooling the prostatic fossa were encouraging as a way to control oozing after open prostatectomy. His series of 15 subjects was too small to assess the true value of the procedure, but it is worthy of further study.

The cooling solution is placed in a balloon that fits into the prostatic fossa for two to four hours after the operation. A solution of 70 per cent alcohol enters the balloon at 5 to 10 degrees below 0 C and leaves at 2 to 3 degrees above freezing. None of the patients required blood transfusions during or after prostatic cooling. Hemostasis was effected quickly after the initiation of hypothermia and urinary drainage remained clear after the urethral catheter was removed.

T. R. Van Dellen, M.D.

[1]Immergut, M.: A New Method for the Control of Post-Prostatectomy Hemorrhage. Ohio St. M. J. (Mar.), 1964.

(Continued on page 580)

Rise in Syphilis—A New Challenge

Despite higher standards of living for most Americans in the decade, reported cases of early syphilis in the United States has almost tripled since 1957.

The significance of such an increase is of concern to society because of the seriousness of the disease and because it suggests a marked increase of indiscriminate or promiscuous sexual relations. We live in a time of rapid environmental and cultural changes. The rising conduct needs to be investigated, understood and evaluated.

This poses a problem beyond the traditional activities of preventive medicine and public health; it will require the attention and cooperation of society as a whole. Organizations like the ILLINOIS SOCIAL HYGIENE LEAGUE are of great importance in spearheading movements and in serving as a liaison within the community.

In Chicago, reported cases of primary and secondary syphilis rose from a low of 231 in 1954 to a high of 943 in 1960. Since 1960, Chicago has been almost the only large city in the country to check further increases above the 1960 level. The number of such cases reported in Chicago for calendar years 1961, 62 and 63 were 920, 851 and 856 respectively. This reflects a genuine concern by the city, but much remains to be done, if the disease is to be controlled as it should be with modern aids to diagnosis and treatment.

A prime objective is the establishment of proper social attitudes among "teen-agers" and all "ages" toward sexual activity. *Evan W. Thomas, M.D., Illinois Social Hygiene League Quarterly, Summer, 1964.*

it's a long wait for the bus home...

Add to it the itching discomfort of *pruritus vulvae* and you have sheer misery. Victims of this embarrassing and often agonizing disorder—and of *pruritus ani*, too—usually can get rapid relief with ARISTOCORT® Triamcinolone Acetonide Cream when conventional measures have proved inadequate. Sparing application to the affected area, 3 to 4 times daily, is all that's required for effective symptomatic control. And when excoriation of the area has led to infection, the choice of NEO-ARISTOCORT® Neomycin Sulfate-Triamcinolone Acetonide will provide activity against a wide range of skin pathogens. A possible side effect may be local skin sensitization due to neomycin. Contraindications (both forms): tuberculosis of the skin, herpes simplex, chicken pox, vaccinia and fungal disease. Prescribe tubes of 5 or 15 Gm. Also available in ½ lb. jars.

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282-4

Editorials (Continued from page 576)

Post Coronary Bed Rest

The infarction resulting from coronary thrombosis usually heals in three to four weeks barring complications. Many patients are allowed out of bed within 14 days to sit in a chair and use the commode. Some leave the hospital after the fourth week to continue convalescence at home.

Strict bed rest for six weeks and another six weeks recuperating at home was common practice a decade ago. The pendulum is swinging the other way and we now have a Puerto Rican internist who advocates early ambulation. By this, he means up and about with 24 hours after being hospitalized. You may have read this in the Medical Tribune. His main reason for doing so is to prevent the apprehension and hopelessness associated with prolonged bed rest. In addition, it discouraged a number of patients from become iatrogenic cardiac invalids. He reported that there were no deaths among 111 patients who had no complications and were able to ambulate within 24 hours after admission to the hospital. All of these men and women were out of bed within the first week enjoying bathroom privileges. No mention was made whether they had mild, moderate or severe infarctions.

Most physicians will follow the middle road when selecting their patients for short-term (4 weeks) treatment. There is no doubt that heart attacks are feared and that many patients cannot afford prolonged hospitalization. Many stand the chance of losing their job. On the other hand, certain changes are taking place in the heart muscles during the 14 days following coronary thrombosis. It does not seem advisable to encourage activity during this time unless the attack is mild. More leeway is possible after the third week when healing has occurred. It is at this time that more attention should be paid to the prevention of recurrences by stressing diet, exercise, relaxation, and the avoidance of tobacco and stress.

T. R. Van Dellen, M.D.

Disposable Hypodermic Syringes and Needles

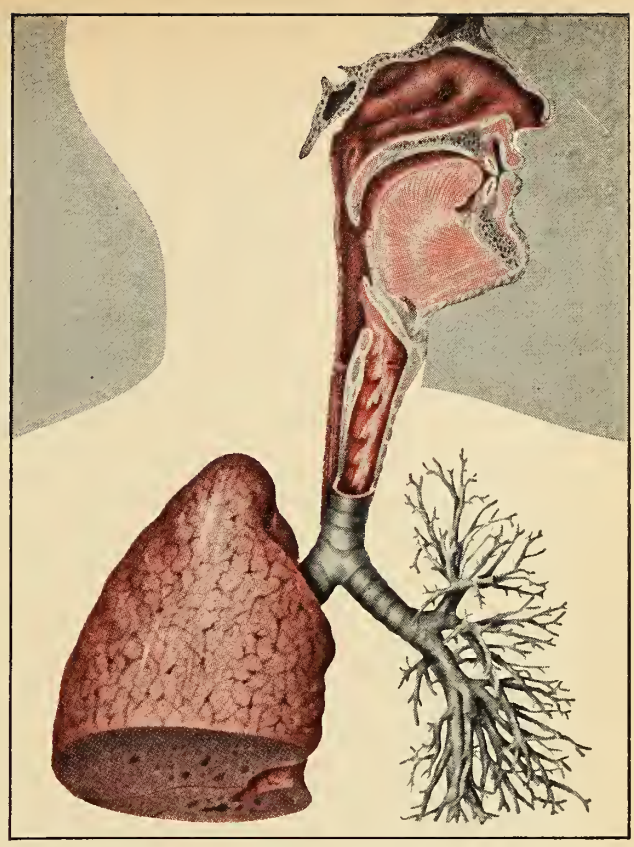
The introduction in recent years of the disposable hypodermic syringe and needle, packed in sterile containers, has proved a marked convenience to the medical profession, hospitals, and nursing homes. They have been designed to be used once and then discarded.

The final disposition of the used syringes and needles is causing some concern to the Department of Public Safety, Division of Narcotic Control, since Inspectors of this Division have been called to investigate the possession of discarded syringes and needles by juveniles who find them in garbage cans or sometimes in city dumps, and are used as squirt guns, and in one case investigated two young boys who were caught attempting to inject air into the vein of a cat. The Division of Narcotic Control was called recently by a sheriff of a downstate county to investigate the discovery of a bag of discarded disposable syringes and needles by a farmer along a county road. One syringe contained a small amount of Dolophine, a narcotic drug; upon further investigation it was discovered that the syringes and needles came from a local hospital and were thrown into a trash can after being used, and were presumed to be burned by the trash hauler.

The Narcotic Drug Laws of the State of Illinois have very stringent regulations pertaining to the possession, delivery, sale, or exchange of hypodermic syringes, hypodermic needles, and similar instruments, and illegal possession provides a heavy fine. Since there are so many potential hazards to children, The Division of Narcotic Control requests all discarded hypodermic syringes, needles, or similar instruments, be totally destroyed by incineration or other means.

Joseph J. Healy, Superintendent
Division of Narcotic Control

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Pyrilamine maleate	12.5 mg.
Phenylephrine hydrochloride	10 mg.
Ammonium chloride	60 mg.
Sodium citrate	85 mg.

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DOSAGE: *Average adult dose*—1 teaspoonful after meals and at bedtime with food. *Children 6-12 years,* ½ teaspoonful; *3-6 years,* ¼ teaspoonful; *1-3 years,* 10 drops; *6 months to 1 year,* 5 drops. Administer after meals and at bedtime with food. On oral Rx where state laws permit.

CAUTION: Should be used with caution in patients with known idiosyncrasies to phenylephrine hydrochloride and in those with moderate or severe hypertension, hyperthyroidism or advanced arteriosclerosis. In these patients the use should not exceed three days. Hycomine* Syrup is generally well tolerated but in some patients drowsiness, dizziness or nausea may occur.

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Progress in Mental Health

Your Committee on Mental Health has been following carefully the progress of the program of the Department of Mental Health of the State of Illinois. Under the leadership originally of Dr. Francis J. Gerty and presently under Dr. Harold M. Visotsky, solid progress has been made. There has been a significant increase in the number, quality and training of psychiatrists and other physicians, nurses, social workers, aides and occupational therapists. Morale in the department is high. The new zone center community hospital program has received national attention as embodying the most modern concepts of psychiatric treatment; indeed they have been accepted as models by other, less advanced states. A variety of objective indices pertaining to patient care have shown recent gratifying jumps. Overall, it is our opinion that Dr. Visotsky and Dr. Gerty are to be commended for developing a program and carrying it out in a manner which is impressive and outstanding. The following statement by Dr. Visotsky presented to the Board of Trustees of the State Medical Society on Setpember 20, 1964, is reprinted to inform the physicians of the state on the progress which has been made.

Donald Oken, M.D., Chairman of ISMS Committee on Mental Health

Mr. Chairman, Members of the Board and Guests. First, let me comment on the place of professionalism in State Government. It seems to me that Departments such as the Department of Mental Health, the Department of Public Health and perhaps even the Department of Registration and Education should be completely free of political intervention. By freedom of political intervention, I mean that these Departments should be programmed and planned by the highest level of professional-staff experienced, trained, and skilled in leadership in these fields. By free I mean free from the expediencies of politics. The administration of state government, although political, must provide the leadership necessary to provide broad bipartisan support for these essential services to the citizenry of Illinois.

Gentlemen, I would like to explore with you the progress made in Illinois since 1961 when we, in the newly created Department of Mental Health, embarked on this planned program of professionalism. With the tenure of office of the Director of the Department overlapping the Governor's term by two years, I can provide the members of the staff coming to work in this Department a tenure of office consistent with the professional background and consistent with the educational programs in Universities and Medical Schools. These professionals coming to work within our Department do not have to come with the fear that they may be ousted or they may resign in disgust because of political intervention. Members have come to us from the East coast, and the West coast, relocating themselves and their families with the



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enthusiastic knowledge that this undertaking in mental health has potential in terms of its program and with the realization that this plan is being placed into operation at a significant pace.

In 1960 the state of Illinois had 508 physicians who designated psychiatry as their specialty. Today that number has increased by about 12 percent of 673. In 1960 the state had 14 full time board certified psychiatrists serving in the then Department of Public Welfare. Today there are 33, an increase of 136 percent. In 1960 we had 167 full time physicians; today we have 228—plus an additional 352 half-time physicians in our Department. In 1960 psychiatric consultants at our state hospitals, excluding the goodly number at Illinois State Psychiatric Institute, numbered 18; today that number is 80.

Psychologists have increased from 71 in 1960 to 161; nurses from 547 to 630; social workers from 113 to 325; therapists from 430 to 579 and psychiatric aides from 5088 to 6145. Our program is attracting staff.

In closing let me make one statement. It is about the 15 Indicies. These are statistics compiled by the joint information service of the American Psychiatric Association and the National Association for Mental Health. The 1964 edition refers to the years 1961 and 1962. This is clearly stated in many references throughout the report. You must remember during the years 1961 and 1962 we were fighting our way out of apathy and near bankruptcy when funds were frozen. In spite of these severe problems we made absolute progress. Between the years 1962 and 1964, we have made significant progress of which we can be proud and of which will be represented in the 1966 edition.

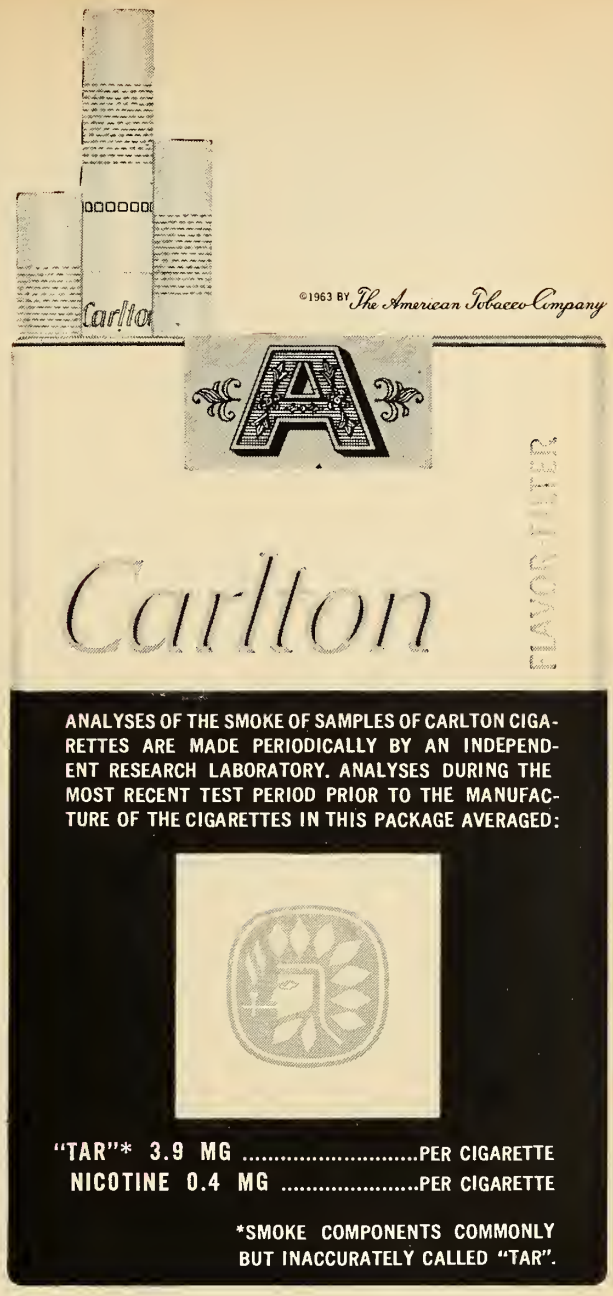
Another point is that the Indicies refer to the average baseline. It must be understood that many states are fighting to become average; this cannot be the norm for Illinois. We must be above average; we must become a leader state in the practice of medicine, and I need not remind you that our mental health program provides the very essence of the practice of medicine. The leaders in the above average states must also be analysed to include such programs as the District of Columbia (federal funds in part) and the State of Alaska, as well as Nevada, in which population and income provide the basis for distortion if this is so desired.

I am gratified by the opportunity to speak not only as the Director of the Department, but as a fellow physician seeking with you the very best of medical care.

Harold M. Visotsky, M.D.
Director
Illinois Department of Mental Health

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GIVE AND TAKE: THE DEVELOPMENT OF TISSUE TRANSPLANTATION by Francis D. Moore, M.D. 182 pages, 19 illustrations. W. B. Saunders Company, Philadelphia.

Organ transplantation is now influencing all forms of medical care. Locally, human renal grafts are being performed in Chicago, an Illinois trained surgeon has accomplished the first human liver homografts, some of the best controlled lung transplant data emanates from Chicago, and even heart transplants are under consideration. This welter of activity demands illumination and this slim volume from the distinguished Moseley Professor of Surgery at Harvard (himself an Illinois native) helps in lighting the subject.

A need exists for a major work on transplantation to document accurately past accomplishments, detail relationships of present events, and indicate the directions which future work will take. This is not a major, encyclopedic work, but it does come close to fulfilling these three needs. Indeed, in some ways it does much more.

For readers of this journal, this volume should be an enjoyment. The complex field of immunology is clarified, tolerance of foreign protein is explained, the mechanism of graft rejection is indicated, and the methods of immuno-suppression are outlined. Historically, the text is enriched by the close contact which Moore has had with important workers in the field. Personal letters, memos, and previously unrecorded experiences highlight the developing story of successful human organ transplantation. Their inclusion contributes to the informality of the format and does not detract from its scientific worth.

It may be said that the Harvard experience is unduly emphasized in Moore's presentation, that the French workers or Starzl in Denver should receive more credit. Perhaps Moore's criticism of Alexis Carrel should be a little less sharp. But these are minor flaws. This brief book in general is a delight. It stands re-reading very well, it is accurate, scientifically sound, even humorous. It will suit the practitioner and specialist alike. Neither should be offended by the unstereotyped presentation. Both should profit by being informed of the progress of medicine's next big breakthrough.

John J. Bergan, M.D.

MODERN TREATMENT, Hoeber Medical Division, Harper and Row, Publishers, Inc. Vol. 1, No. 1 (Jan.) 1964. Price: $16 per year (bi-monthly publications).

This is the first appearance of this publication which is a symposia of treatment in certain selected diseases. This edition was on the treatment of renal disease and thyroid disease.

The guest editors and contributors on each of the subjects discussed were by an imposing list of experts in these fields. The contents of the text are the results of the compilation of the newest ideas in the treatment and afford the reader not only this information but many of the newer and basic concepts of the causes of these pathologic states.

I heartily recommend this publication to all physicians interested in acquiring the newest principles in the treatment of renal and thyroid disease. If the subsequent issues are up to the high standards of the initial publication, the accumulation of this series will provide the physician with an excellent source for methods of treatment.

Maurice Gore, M.D.

ATLAS OF GENERAL SURGERY, second edition, Joseph R. Wilder, M.D., F.A.C.S., illustrated by Shirley Baty, The C.V. Mosby Company, St. Louis, 1964.

The outstanding feature of this atlas is the superb quality of its illustrations. The artwork was done by Miss Shirley Baty, whose style is strongly reminiscent of that of Tom Jones and Willard Shepard.

This second edition includes several procedures in vascular surgery as well as arteriography. The author does not claim originality for the illustrated techniques, but I know of no atlas which portrays standard operative techniques more clearly or more understandably. No questionable or impractical procedures are included.

The atlas is recommended for young surgeons, residents and as a reference work for surgeons whose daily work provides little variety. The step-by-step illustrations offer unsurpassed "how-to-do-it" information.

Harold Laufman, M.D.

(Continued on page 599)

PULSE
of the ILLINOIS STATE MEDICAL SOCIETY

A Service of the Public Relations Division *November, 1964*

Show 150 How to Use Emergency Hospitals

Civil Defense Medical Teams Learn to Set Up Units for Disaster Care

Some 150 physicians, nurses and hospital personnel assigned to Illinois' 60 Civil Defense Emergency Hospitals will return to "school," Saturday, November 21, to learn the ABC's of the CDEH program.

The "school" will be York Community High School in Elmhurst—which houses one of the few CDEH training units in the country—with classes conducted under the direction of Dr. Max Klinghoffer, chairman of the ISMS Disaster Medical Care Committee.

Actually, the unique program will be an eight-hour training session designed to orient CDEH personnel in the establishment and operation of the portable hospital.

"While there are 2,000 of these crated emergency hospitals stashed away in dormitories, basements, court houses, high schools and supermarkets across the nation," Dr. Klinghoffer pointed out, "few people actually know what to do with them.

"It is our aim, therefore, to train as many people as possible in the actual operations of the CDEH so that—if and when a nuclear attack or natural disaster strikes—they will be prepared to uncrate the materials, set up the hospital and operate it the way it was intended."

The training program—believed to be the first of its kind—will be co-sponsored by the Illinois State Medical Society and the Illinois Department of Public Health in cooperation with the Illinois Department of Civil Defense.

The CDEH is a completely functional, 200-bed general hospital packed in boxes. It contains admitting and triage sections, wards, operating rooms, x-ray, laboratory, pharmacy and central supply, including drugs and surgical equipment.

Winnebago M.D.'s Conducting Clinics to Examine, Inoculate 600 Kids . . . Free

Forty-five Winnebago County physicians are spearheading a task force of 140 volunteers in a drive to examine and inoculate 600 third grade children in free medical clinics.

Children of indigent parents are being transported to conveniently located schools in Rockford to be immunized against diptheria, tetanus, smallpox and polio.

The clinics are organized and conducted by the Winnebago County Medical Society with the help of its auxiliary, according to Dr. Marshall O. Alexander, president.

Begun the latter part of October, more clinics will be held on Nov. 18 and Dec. 16. Plans call for 10 physicians at each location to give physical examinations, while five other doctors provide immunization.



This wide-eyed Rockford youngster apparently doesn't appreciate the old adage that "everything good comes with a little pain." And it's a good bet, too, that Dr. M. L. Duchon purposely kept his back to the camera to avoid recognition as one of the "heavies" in the Winnebago County Medical Society's immunization campaign.

COUNTY CAPSULES

★ ★ ★

BUREAU COUNTY Medical Society will hear Dr. Harry F. Dowling discuss "The Common Cold and Other Upper Respiratory Infections" at a dinner-meeting at 7:00 p.m. Tuesday, December 8, at St. Margaret's Hospital in Spring Valley. Dr. Dowling is chief of Medical Service at the University of Illinois' Research and Educational Hospitals.

★ ★ ★

KANE COUNTY Medical Society (Northern Branch) will hear Dr. John B. Hall discuss "Immunization for Adults" at a luncheon-meeting noon Thursday, November 19, at St. Joseph Hospital in Elgin. Dr. Hall is assistant professor of bacteriology and preventive medicine at Loyola University's Stritch School of Medicine and assistant professor of pediatrics at the University of Illinois College of Medicine.

★ ★ ★

KNOX COUNTY Medical Society will hear Dr. Karl H. Pfuetze discuss "Modern Treatment of Tuberculosis" at a dinner-meeting at 6:30 p.m. Thursday, November 19, at the Holiday Inn in Galesburg. Dr. Pfuetze is medical director and superintendent of the Chicago State Tuberculosis Sanitarium.

★ ★ ★

MADISON COUNTY'S Tri-City Medical Society has elected the following officers, all of Granite City: Dr. Robert Hill, president; Dr. Melvin Freedman, vice-president; Dr. Frank Dioneda, secretary; and Dr. Felicia Koch, treasurer.

Peoria Physicians Host to AMA Chief, Colleagues and Wives from 9 Counties



Dr. Donovan F. Ward, A.M.A. president, and Dr. Lorin D. Whittaker, member of the ISMS Public Affairs Committee, met recently with the Congressional Action Committee of the Peoria Association of Commerce. Shown here at the meeting, from left, are (seated) Dr. Ward, Thomas Hinrichsen, chairman of the Committee; (standing) Dr. Whittaker and Herbert Johnson, executive vice-president of the Peoria Association of Commerce. The meeting was in conjunction with Dr. Ward's recent visit to Peoria. He spoke at the Peoria Medical Society monthly membership meeting to nearly 500 physicians and their wives from a nine-county area.

Establish Scout Post for Medical Explorers

The Sangamon County Medical Society has established a Medical Explorer Scout Post in Springfield.

The purpose of the new post is "to help youths 14 years of age and older explore various medical and para-medical occupations which they may wish to pursue."

Members of the guidance committee include Dr. Albert T. Kwedar, chairman; Dr. Edward S. Evenson, institutional representative; Dr. Clifford J. Lynch and Dr. James Singleton, members; William L. Boyd, adviser; and Keith Blair, assistant adviser.

Rockford M.D. Honored for Blood Bank Service

Rockford's Dr. Paul A. Van Pernis has been cited for "distinguished service in inspection and accreditation for the American Association of Blood Banks (AABB).

Dr. Pernis, senior delegate from the Winnebago County Medical Society to the Illinois State Medical Society, received the award for his service as chairman of the AABB blood bank inspection and accreditation program since it started six years ago. He is a member of the Governor's Commission on Laboratories, Blood Banks and Blood Depositories.

Millions Get ISMS Message Via Billboards





Voluntary Organizations, Plus Advertisers Add to Top Health Campaign

Millions of Illinois citizens are getting the ISMS message: "Early Detection, Early Treatment . . . Retarded Children Can Be Helped."

This is the theme being carried this month on more than 150 billboards throughout the state in the society's outdoor advertising preventive medicine campaign. The November program is supported in part by the Illinois Council for Mentally Retarded Children.

The month of September promoted the theme "TB or Not TB . . . Only Tests Can Tell" with backing from the Chicago and Illinois tuberculosis associations.

The ISMS public service program was inactive during the month of October due to heavy demands placed by political candidates on the 32 billboard companies which provide free space for health posters.

The campaign in December will be devoted to promotion of early cancer detection—with cooperation of the Illinois Division of the American Cancer Society.

ISMS Physician Takes Part in Award Presentation at AMA's Annual Congress on Occupational Health



A key participant in this award presentation at the 24th Annual AMA Congress on Occupational Health, held recently in Houston, Tex., was Dr. Edward C. Holmblad of Chicago, left, chairman of the ISMS Committee on Occupational Health. Dr. Holmblad also is chairman of the Medical Advisory Committee to the President's Committee on Employment of the Handicapped. Others in the picture, from left, include Dr. Henry F. Howe, chairman of the AMA Department on Occupational Health; Harold Russell of Washington, D.C., chairman of the President's Committee; Dr. John S. Young of Denver, Colo., who received the AMA-President's Committee award citing him as "Physician of the Year who contributed most to employment of the handicapped;" Dr. E. S. Jones of Hammond, Ind., chairman of the AMA Council on Occupational Health; and Dr. Lee Cady of Houston, Tex., past award winner. Russell is the much celebrated double amputee hero of World War II who starred in the Academy Award film "The Best Years of Our Lives" with Frederic March and Myrna Loy.

AUXILIARY NEWS

EDITOR
Mrs. Oliver Veneklasen
ASS'T EDITOR
Mrs. Theodore Proud

Adams County Auxiliary Plans to Aid Handicapped

Dr. Kenneth Keeton was principal speaker at the Nov. 4 annual Health Careers Night conducted by the Woman's Auxiliary of the Adams County Medical Society in Quincy.

The auxiliary has voted to give assistance to the Quincy Workshop for the Handicapped at Good Samaritan Home this winter. Auxiliary members will give their handiwork as Christmas gifts.

Medicine and Religion Is Topic for Community Service Day in Chicago

The Chicago Medical Society's auxiliary was host to city and state officials, clergy, hospital staffs, educators and business and labor leaders at its annual Community Service Day.

Highlight of the event—held November 9 in Orchestra Hall—was a medicine and religion panel discussion on "The Physician, The Clergy and The Whole Man."

Moderator of the panel was the Rev. Paul B. McCleave, director of the AMA's Department of Medicine and Religion. Panelists included Dr. Willis J. Potts, former surgeon-in-chief at Children's Memorial Hospital; Dr. John F. Sheehan, dean of Loyola University's Stritch School of Medicine; Dr. Eric Oldberg, head of the Department of Neurology at the University of Illinois College of Medicine; the Rev. John M. Vayhinger, Rabbi Ephraim H. Prombaum and the Rev. Richard A. McCormick.

Chairman of community service activities is Mrs. John Van Prohaska.

McLean Auxiliary Hosts State Prexy at Luncheon



Hostess Mrs. George Irwin, left, president of the McLean auxiliary, and Mrs. Willard C. Scrivner of East St. Louis, president of the ISMS auxiliary, beam their approval of a successful opening luncheon the county group held recently in Bloomington.

Peoria Auxiliary Benefit Provides Scholarships

More than $1,100 was raised by the Peoria auxiliary at its recent annual Allied Medical Careers Benefit luncheon and fashion show to provide scholarships for students in the para-medical fields.

Leaders from 10 Counties Attend Eighth District's Annual Meeting to Map Plans for Coming Activities



Obviously having a lot of fun at the ISMS Auxiliary's recent Eighth District Annual Meeting in Robinson are, from left, Mesdames Michael Russo, Champaign County president; Mrs. Willard Scrivner, state auxiliary president; Harold Keschner, Vermilion County president; John Koenig, state auxiliary president-elect; Thomas Kelso, district councilor; Samuel Allen, Crawford County president; and Wendell Roller, AMA-ERF state auxiliary chairman. Mrs. Randolph Olmstead of Robinson (not shown) was elected to succeed Mrs. Kelso as eighth district councilor in May, 1965. The eighth district includes the counties of Champaign, Coles-Cumberland, Crawford, Vermilion, Douglas, Edgar, Clark, Jasper, Richland and Lawrence. Plans for coming activities were detailed at the regional conclave held at the Crawford County Country Club. Other annual meetings held recently were those of the second, fourth, ninth and tenth districts.

BOOK REVIEWS—*(Continued from page 586)*

Bleeding in the Surgical Patient. Seymour Gollub and Alex W. Ulin, conference co-chairmen. Edited by Harold E. Whipple. Published by the New York Academy of Sciences, Annals of the New York Academy of Sciences, Volume 115, 542 pages. Price $7.00.

The History of Surgery is the story of hemostasis. This ranges from the days of antiquity and mysticism through Hippocrates and cautery, Archigenes and the ligature, Morel and the tourniquet, and Halstedian accurate hemostasis. Today's surgeon has had to become aware of the non-technical factors in hemostasis. He is called upon to perform surgery on the hemophiliac, judge whether to continue or to stop anticoagulants before operation, and diagnose fibrinopenic and fibrinolytic states.

This volume, one of the few good instant textbooks, is the product of a conference sponsored by the publisher in May 1963. It neatly summarizes current knowledge about bleeding and coagulation and presents it in detailed but well edited form. Discussions on wet or dry surgical sponges are juxtaposed to those on coagulability changes after incompatible blood transfusions. The technical rubs shoulders with the esoteric. Other valuable presentations explore surgical bleeding in polycythemia vera, experience in patients with thrombocytopenia and fibrinolytic bleeding. Newer techniques in hemostasis such as gastric hypothermia, electrical hemostasis, prevention of hemorrhage with anticoagulants, and use of amino caproic acid are also evaluated.

An immence amount of data is published and tabulated in this volume. New facts are brought forth and the many scientific disciplines concerned with bleeding find their forum here.

The disadvantage of the symposium publications as a learning aid is their lack of value judgments, the printing of the premature, the advocacy of the new rather than the true. This symposium has this fault in less quantity than others. It is an excellent reference work for the hematologist and for use in the hospital library but it is not for the clinician's bookshelf.

John J. Bergan, M.D.

Textbook of Otolaryngology. By David D. De Weese, M.D., and William H. Saunders, M.D. Second Edition, The C. V. Mosby Co., Saint Louis, 1964.

The authors are to be congratulated that the first revision of their textbook maintains the concise, clear presentations that made the first edition such an outstanding book. The rapid advances in the field of otolaryngology, that have been occurring since the late 1930's, called for a textbook that stressed the fundamentals of otolaryngology, but also emphasized the new concepts of diagnosis and treatment. This the authors have accomplished by strict and skillful editing—with deletion of all non-essential material, views and opinions. As a result, the discussions of the anatomy and physiology of the areas involved are concise and accurate and in enough detail for adequate and proper orientation. Descriptions of the diseases of these areas are also minimal, but encompass most of the pathological states commonly encountered.

Gastro-enterology: Vols. I and II. Second Edition. By Henry L. Bockus, M.D., Emeritus Professor of Medicine, University of Pennsylvania Graduate School of Medicine, and present and past colleagues at the University of Pennsylvania Graduate School of Medicine & School of Medicine. Price $25.00—Vol. 1. (958 pages). Price $28.00—Vol. II (1241 pages). W. B. Saunders Company, W. Washington Square, Philadelphia, Pennsylvania. 1963.

The first two volumes of the long awaited second edition of this classic gastro-enterologic treatise have now become available. The third volume of the trilogy is scheduled for June, 1965. In the twenty years since the appearance of the first edition much new physiologic, biochemical therapeutic and clinical knowledge has become available; for these reasons the text has been revised and in many areas rewritten. The staff of authors has been enlarged and comprises the faculty, former faculty, and graduate students of the Graduate School of Medicine and the School of Medicine of the University of Pennsylvania. In the preface Dr. Bockus stresses the sound clinical approach and indeed, in these two volumes, we find a predominately clinically oriented exposition of the problems discussed. For each disorder, etiology, pathology, clinical features, diagnostic aids, radiologic findings, differential diagnosis and therapy are discussed.

Volume I consists of three sections: examination of the patient, the esophagus, and the stomach. Volume II covers the small intestine, absorption and nutrition, the colon, peritoneum, mesentery and omentum. Volume III will include the liver, biliary tract, pancreas, and secondary gastrointestinal disorders.

Volume I opens with a fine chapter on history taking including a copy of the form used by the author for recording the history and physical examination. This is followed by two good but belabored chapters on symptomatology. It was disturbing to find no reference to the well known, albeit rare, etiologies of hypokalemia and hypercalcemia in a discussion of thirst. The remaining chapters of the first section on physical examination, oral manifestations and laboratory aids are quite adequate.

The second section covers disease of the esophagus in detail and with clarity, though again, often with repetition as in Chapter 7 and 10 dealing with motor function of the esophagus.

The third section on the stomach is better than the first two. The chapter on complications of ulcer is scholarly and less dogmatic than the chapter on management and abounds with useful charts culled from the literature. There is, however, no mention of the hypotensive treatment of shock secondary to acute blood loss, and insufficient attention to the gastirc atony and dilatation which may accompany diabetes. The disadvantages of gastric freezing are not mentioned. The value of the rather extensive dietary regimens proposed for the treatment of peptic ulcer are debatable.

The second volume extensively analyses diseases of the small intestine with entire chapters devoted to such rarities as duodenitis, diverticulosis of the small intestine and Whipple's disease. The chapters on malabsorption and protein losing gastro-enteropathy are quite

good though the value of serum carotene as a simple and valuable screening test is not mentioned. The chapters devoted to diseases of the colon are, as a whole, inclusive and thorough. Particularly outstanding is the discussion of functional disorders, although some modalities of treatment are presented as favorites of the author with no reference to their scientific merits or rationale. The final chapters on the peritoneum, mesentery and omentum, including discussions of peritoneoscopy and lymphangiograph and the acute abdomen are well done.

However, there are some faults. The volumes are heavier in weight than they need be. The various authors have stated the facts in depth, but in an uneven prolixity of words and in the opinion of this reviewer many chapters could have been condensed without significant omissions or loss of readability. The volumes also suffer somewhat from the single school of thought approach often found when all authors are from the same geographic location. A slightly more basic approach to the problems discussed would have been more desirable with greater emphasis on the newer physiological and biochemical knowledge underlying therapy, diagnosis, and treatment. Many discussions of therapy are antiquated and lacking in firm scientific theory and are not critically presented.

For the medical student and generalist these volumes have no peer, nor can they be equalled for the gastroenterologist desiring a quick review of a particular subject. For more critical, controversial, and often more sophisticated physiologic approaches to many of the areas mentioned one must often go to more recent monographs or literature. All considered, these shortcomings do not substantially detract from the great value of these volumes and their wide range of usefulness as the best current text in gastro-enterology.

Roy G. Nagle, M.D.

Games People Play, Eric Berne, M.D., Grove Press, Inc. N.Y. 1964. $5.00.

This book could have been called "The Game of Life" because the author, a psychiatrist, believes people play games unconsciously in their interpersonal relationships. In this way they hope to avoid reality, to conceal ulterior motives, or to rationalize their behavior. His premise is that tensions are discharged and satisfactions are gained by these games, which are a substitute for real living. If the player can be made to understand these symbols and rituals, he can achieve autonomy.

Dr. Berne offers the reader 36 such types of games which he breaks down into categories like life, marital, party, sexual, underworld, consulting room, and good games. Some are understandable, others are more subtle. Mr. and Mrs. White, for example, play a marital game. She suggests going to a movie and he agrees. Before they leave she mentions the house needs painting. She knows this remark may upset him because he had told her previously that their finances were strained. He responds rudely, she takes offense and tells him since he is in such a nasty mood, she will not go with him to the theater. He retorts he will go by himself.

Various alternates to the game are mentioned in analyzing why the couple behaves this way. Movies are stimulating sexually and it is more or less anticipated that after returning home they will make love. Mrs. White may have wanted to avoid intimacy so she sets up the game. After her husband's reaction to her remark, she could have taken him by the arm, smiled, and said "let's go." Or, if Mr. White was not playing a game in his attitude, he could have coaxed her to go, either as a sulky child or an adult.

T. R. Van Dellen, M.D.

Physiologic Principles of Surgery, Leo M. Zimmerman and Rachmiel Levine, 2nd Edition, W. B. Saunders Company, Philadelphia, 858 pages, $20.00.

It is now 25 years since C. Lovatt Evans wrote in the preface to Starling's *Human Physiology* that "all that can be done by the author of a textbook is to select such examples as represent, in his opinion, either current trends or well established advances." Today, his words are an apt description of this excellent physiology text. Zimmerman and Levine have made their selection of new material somewhat easier by choosing chapter authors of unassailable rank. These, in turn, have selected from what is new and have apparently endeavored to present what is to be lasting.

Dreiling's chapter on the pancreas exemplifies this concept. Older theories of pancreatitis, for example, are presented with appropriate references, but they share space with a critique of old ideas and a presentation of the new. Clinical manifestations are examined from the physiologic vantage and diagnostic methods are explained by their physiologic background. The new is explicable in terms of the old and is enriched by it.

Many Illinois surgeons have contributed excellent sections to this edition, as they did in the old. One of the youngest of these, John Kukral of Northwestern, did an admirable and workmanlike job of up-dating the late Howard Armstrong's section on plasma proteins. This and Tom Baffes' chapter on surgery of the newborn are two of the best illustrated portions of the book. Similarly, de Peyster and Gilchrist's contribution on hyperinsulinism is a model of brevity and clarity which is presented with commendable authority.

Leo Zimmerman has confined himself to a single chapter on the venous and lymphatic system, and Levine appears only in the section on the adrenal glands. Other authorities include Sadove on anesthesia, Harry Oberhelman, Jr. on the stomach, and David Abramson on peripheral arterial disorders. The carefully worked out presentations exemplify what diligence and preparation can accomplish. They stand in sharp contrast to the "instant textbooks," the edited symposia, which now flood the medical market.

This is a worthwhile book to replace that now outdated physiology book from medical school that gathers dust on almost every physician's book shelf.

John J. Bergan, M.D.



Rx Reviews and New Products

PEDIATRIC BETAMETHASONE

A liquid form of Celestone (bethamethasone) for pediatric use has been introduced by the Schering Laboratories Division of Schering Corporation. Bethamethasone, originally discovered by Schering, has been marketed in tablet form since 1961.

Known as Celestone Syrup, the compound contains 0.6 mg. of betamethasone in each 5 cc. of syrup and is packaged with a medicinal teaspoon, calibrated to facilitate administration of half teaspoonful doses. It is produced in four-ounce bottles.

Celestone Syrup is indicated in the management of various allergic, dermatologic, ophthalmologic, rheumatic, and other conditions responsive to corticosteroid therapy. It is economical (costs less, per equivalent dose, than other leading corticosteroids), pleasant tasting, and convenient to administer.

Celestone Syrup is available only upon prescription.

FURESTROL™ VAGINAL SUPPOSITORIES

Manufacturer: Eaton Laboratories, Division of The Norwich Pharmacal Company, Norwich, New York.

What the Product Is: Furestrol Vaginal Suppository is a new antibacterial-estrogenic product developed specifically for the dual problem of atrophy and infection in postmenopausal vaginitis. Each vaginal suppository contains 0.3% (5 mg.) of the active ingredient Furacin® (nitrofurazone, Eaton) and 0.25 mg. diethylstilbestrol in a water-miscible base composed of glyceryl monolaurate and sorethytan (4) monostearate (Tween 61).

What It's for: Furestrol Vaginal Suppositories are indicated in the treatment of atrophic senile vulvitis, vaginitis and cervicitis where correction of hormonal imbalance is desirable. The combined action of the topical antibacterial Furacin and the estrogenic agent is useful in correcting atrophic changes in the vaginal mucosa, and in controlling associated bacterial infections. Furestrol provides symptomatic relief of vulvovaginal irritation, burning sensation, leukorrhea and resulting malodor, and dyspareunia.

How Administered: Usual daily dosage is one Furestrol Suppository administered intravaginally for twelve days; but dosage may be increased to one suppository twice daily.

How Supplied: Available on prescription only each 2 Gm. Furestrol Vaginal Suppository is hermetically sealed in orchid foil. The product is supplied in packages of 12 suppositories.

NEW DOSAGE STRENGTH OF ROBINUL®

Product: Robinual® Forte and Robinual®-PH Forte.

Manufacturer: A. H. Robins Company, Inc., Richmond, Virginia.

Description: Robinual Forte: each pink, scored, and compressed tablet, monogrammed AHR/2, contains glycopyrrolate, 2 mg. *Robinul-PH Forte:* each blue, scored, and compressed tablet, monogrammed AHR/2, contains glycopyrrolate, 2 mg., and phenobarbital, 16.2 mg.

Indications: Robinual Forte and Robinul-PH Forte, providing double the 1 mg. content of glycopyrrolate in Robinul and Robinul-PH, are primarily indicated for patients who are less responsive to anticholinergic therapy and for control of the more prominent symptomatology associated with acute episodes of gastrointestinal disorders.

Dosage: Average and maximum recommended dose of Robinul Forte and Robinul-PH Forte is one tablet three times daily (in the morning, early afternoon, and at bedtime), adjusted to the individual patient's response. After the more severe symptoms associated with acute conditions have subsided, the dose may be reduced to the minimum required to maintain symptomatic relief.

Indications, contraindications, precautions and side effects applicable to the 1 mg. dosage forms also apply to Robinul Forte and Robinual-PH Forte:

Emphasis should be on total management, with due consideration of the various therapeutic modalities available, including diet, antacids, anticholinergic agents,

sedatives, and attention to emotional problems. Accordingly, glycopyrrolate is recommended in the management of gastrointestinal disorders amenable to anticholinergic therapy, such as: (1) duodenal ulcer, duodenitis, pylorospasm; (2) gastric ulcer, gastritis, esophageal hiatal hernia, hyperchlorhydria, pyrosis, aerophagia, gastroenteritis; (3) esophagitis; (4) cholecystitis, chronic pancreatitis; (5) spastic and irritable colon, ulcerative colitis, functional bowel distress, diverticulitis, acute enteritis, diarrhea; and (6) splenic flexure syndrome, neurogenic gastrointestinal disturbances. When these conditions are associated with psychic overlay, the formulation with phenobarbital may be indicated.

Contrindications and Precautions: Robinul Forte and Robinul-PH Forte are contraindicated in glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (mega-esophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte (glycopyrrolate with phenobarbital), sensitivity to phenobarbital. Administer with caution in the presence of incipient glaucoma.

Side Effects: The most frequent side effect noted during clinical trials was dry mouth. Blurred vision, constipation, and urinary hesitancy have been reported infrequently. Other side effects associated with the use of anticholinergic drugs include: tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

Packaging:

	Size	*Unit Cost to Druggists*
Robinul Forte	100s	$6.00
	500s	27.50
Robinual-PH Forte	100s	$6.25
	500s	28.75

ANABOLIC STEROID

Composition: Anavar, a new anabolic agent, is 17β hydroxy-17β-2-oxa-5φ-androstan-3-one.

Dosage Form: Scored, uncoated, oval, white tablets of 2.5 mg. for oral use.

Properties and Advantages: Anavar is useful as a therapetuic adjuvant to enhance protein anabolism and to arrest the catabolic effects of various disease processes. It is extremely well tolerated by most patients. Androgenicity is now both in animal and clinical studies, and thus Anavar (compared to other anabolic agents) has an increased therapeutic potency and a wider dosage-response range which permits a maximal therapeutic response at various dosage levels without increasing side effects. It does not inhibit pituitary function as determined by gonadotropin excretion, by sperm counts or by regular menstrual periods when given in recommended doses.

Indications: It is effective in promoting weight gain after extensive surgery, chronic infections or severe trauma, in offsetting corticosteroid catabolism, in relieving the bone pain of osteoporosis and in promoting anabolism in certain patients without definite pathophysiologic disorders.

Administration: Each patient's response must be considered in order to obtain optimal beneficial effects to Anavar. The average *adult dosage* is one 2.5-mg. tablet two to four times daily. However, as little as 2.5 mg. or as much as 20 mg. daily may be required for an optimal effect, obtained in two to four weeks. Daily *children's dosage* is 0.25 per kilogram or 0.125 mg. per pound of body weight, also for two to four weeks. In both adults and children courses may be repeated, if necessary, but total and continuous therapy is not to exceed three months.

Additional Information, including contraindications, warnings, precautions, and side effects, will be found in the Detailed Product Information section of the catalog.

PARACERVICAL BLOCK ANESTHETIC

Paracervical blocks with the anesthetic Carbocaine proved to be a "safe, reliable and highly effective method of relieving the discomforts" of childbirth labor pains, according to Dr. James W. Bledsoe, Gainesville, Florida.

Writing in the *Journal of the Mississippi Medical Association* (5:17, 1964) he reports on results of a study of 100 obstetrical patients at the University of Mississippi School of Medicine. The women received paracervical blocks alone or combined with pudenal blocks. About 40 per cent of the women gave birth for the first time. They were prepared for anesthesia with pHisoHex, Zephiran and a vaginal examination.

Seventy-eight per cent of patients reported excellent or good pain relief, Dr. Bledsoe says, adding that the full effect was usually obtained within five minutes. Only five patients said Carbocaine provided poor relief of pain.

The average duration of paracervical block was 90 minutes. Therefore, the investigator notes, Carbocaine's greatest usefulness is for women who have previously delivered babies where a relatively short duration of labor can be expected.

The method was "accepted by patients and physicians alike," and has been continued as standard practice in the medical school's obstetrical service. In addition to "excellent analgesia," other well-like features were ease of administration, and rapid onset.

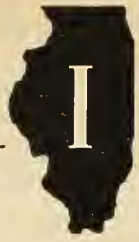
"There was a distince impression among all the observers that paracervical block resulted in accelerated cervical dilatation," Dr. Bledsoe says.

Combined paracervical and pudendal block anesthesia made it possible to "carry patients completely through labor and delivery on that alone, in most instances."

Complications were "negligible," with no cases of hypotension or hypertension, no perforated membranes and no untoward reactions to Carbocaine, which is manufactured by Winthrop Laboratories.

An application for this particular use of Carbocaine has been filed with the Food & Drug Administration and is awaiting action.

NEWS and ANNOUNCEMENTS



County News

The Diabetes Association of Greater Chicago will offer its annual Diabetes screening program from November 15 through November 21. The Dreypak envelopes will be distributed to the public by cooperating hospitals, industries and pharmacies. Individuals exhibiting glycosuria will be so informed and urged to consult their own physician. The physician is an indispensable link in the Diabetes Detection program. Only he can make the diagnosis of Diabetes. A repetition of the screening urinalysis in the doctor's office regardless of the results is inadequate. The two hour post prandial blood sugar or glucose tolerance tests is strongly advised. The diagnosis of Diabetes Mellitus may be made if the former exceeds 120 mg. per 100 ml. (true glucose). Lower values suggest the need for the glucose tolerance test to clarify the diagnosis. The diagnosis of Diabetes may be made when any three values exceed the following: Fasting—110, 1 hour—170, 2 hours—120 and 3 hours—110. If only two values are excessive Diabetes is probable. A family history of Diabetes warrants periodic examinations for glycosuria and hyperglycemia.

Appointments

Leonidas H. Berry, M.D., Chicago, Illinois, former assistant clinical professor of medicine at the University of Illinois, presently professor of gastroscopy and gastroenterology, the Cook County Graduate School of Medicine, Chicago, Illinois, senior attending physician, Michael Reese and Provident Hospitals, was elected to the office of president-elect at the sixty-ninth annual convention of the National Medical Association, Washington, D.C., August 2-8, 1964.

The 5,000 member, predominantly Negro organization was organized in 1895.

University of Illinois announced that Dr. Max S. Sadove, professor of anesthesiology and head of the Division of Anesthesiology, U. of I. College of Medicine, has accepted an appointment to the Special Medical Advisory Group to the Veterans' Administration, Washington, D. C.

Dr. Sadove's term is for five years. The group represents all of the medical and para-medical fields that serve in consultative capacities to the Chief Medical Director, Dr. Joseph H. McNinch. Other members of the U. of I. College of Medicine faculty presently serving on this body are Dr. Robert Ray, professor and head of the Department of Orthopaedic Surgery, and Dr. Francis Lederer, professor and head of the Department of Otolaryngology.

In addition to the above-mentioned honor, Dr. Sadove's other Veterans' Administration appointments are: Area Consultant, VA Area Medical Office; and head of Departments of Anesthesiology, West Side Veterans' Administration Hospital, and Veterans' Administration Hospital, Hines, Illinois.

New Director for Population Studies

Roger Revelle, a leader in organizing international scientific research, will become Director of the new Center for Population Studies in the Harvard University School of Public Health.

Harvard President Nathan M. Pusey and Dean John C. Snyder of the School of Public Health announced that, effective October 1, Dr. Revelle will hold the new Richard Saltonstall Professorship of Population Policy, and will direct Harvard's research, teaching, and public service in population studies. New facilities to house the Center are nearing completion at 665 Huntington Avenue in Boston and the Center also will have a headquarters in Cambridge at 9 Bow Street.

Dr. Revelle now is University Dean of Research for the University of California, and Di-

rector of the Scripps Institution of Oceanography. Until 1961, he was Chief Campus Officer and Dean of the School of Science and Engineering at the University's San Diego campus. He played a major role in planning the new University of California at San Diego, and in recruiting faculty for it. From 1961 to 1963, he was Science Adviser to the Secretary of the Interior.

The Center for Population Studies will serve as a focal point for physical and social scientists, engineers, and scholars in the humanities to work together on the increasingly serious problems resulting from rapid growth of human populations throughout the world.

Awards

The Griffin Award Banquet, highlight of the 15th Annual Meeting of the Animal Care Panel, was held Thursday night, September 24th, at the New York Hilton.

An association of scientists and researchers, the Animal Care Panel is a non-profit educational organization of institutions and individuals interested in the production, care and study of animals used in biomedical research. The membership of the ACP includes representatives from medical, dental and veterinary medical schools, pharmaceutical and biological manufacturing firms, hospitals, independent and government laboratories, cage, feed and equipment manufacturers.

Principal speaker before the organization, whose membership exceeds over 1500, was Dr. Rene J. Dubos, world renowned scientist of the Rockefeller Institute, who spoke on "Infectious Health." Born in France, Dr. Dubos received his Ph.D. from Rutgers University in 1927 and joined the staff at the Rockefeller Institute that same year. He is the recipient of the Phillips Award ('40); Johnson Award ('40); the Wilson Medal ('46); the Trudeau Medal ('51); Triennial Award of the Massachusetts General Hospital ('53); the Hitchcock Award ('54); Ricketts Award ('58); and the Lasker Award ('48).

The Annual Griffin Award (named in honor of Charles A. Griffin, a pioneer in improving laboratory animal care and use for research) of a plaque and honorarium of $500 was presented to Philip Charles Trexler by Dr. Robert Flynn, president of the Animal Care Panel, in recognition of his outstanding work in the development of inexpensive plastic film isolation for germ-free animal research. These have reduced the cost of such research, bringing it within the reach of every laboratory and producer.

Prof. Trexler, a native of California, earned his B.S. and M.S. degrees at the University of Notre Dame and remained there as a member of the faculty in the Department of Biology until 1962. He was associated with J. A. Reyniers at the Lobund Institute during this period, concentrating on germ-free techniques. In 1961 and 1962, in addition to his duties at Lobund, he held a visiting Professorship at the School of Veterinary Medicine, Ohio State University. The following year, he joined the staff at Albert Einstein College of Medicine, collaborating with Dr. S. H. Levenson of the Department of Surgery in developing plastic isolators for use in human surgery. Since 1963, he has been Director of Research for the Charles River Breeding Laboratories and the Snyder Manufacturing Company, and Director of the Gnotobiotic Research Foundation.

Doctor Wins Contest

Dr. Roland I. Pritikin, Rockford, ophthalmologist, has won first place among 35,000 entries in a world-wide medical slide contest.

His entry, made last fall on the Pakistan-Afghanistan frontier, showed eye surgery being performed in the open.

The contest was conducted by the U.S. Committee of the World Medical Association, an organization that includes physicians from all nations outside the Iron Curtain.

Grants

Scientists at Children's Memorial Hospital, in Chicago, are testing a method that may lead to important new knowledge about the way our brain cells operate—through a $6,355 grant from The Epilepsy Foundation.

J. Gordon Millichap, M.D., neurologist, and John C. Gilbert, Ph.D., a biochemist, are investigating the theory that anti-convulsant

drugs somehow alter the way in which brain cells absorb nutrient sugar.

If this proves to be true, Doctors Millichap and Gilbert will have helped to provide a virtual roadmap of the brain's millions of tiny cells—and new ways of treating epilepsy may offer fresh hope to more than two million Americans with this affliction.

The grant is part of a much larger "Research Challenge" program, in which The Epilepsy Foundation provides funds to scientists seeking answers to certain specific questions about epilepsy.

The Epilepsy Foundation is a national, nonprofit health agency, solely supported by public contributions, with headquarters in Washington, D. C.

Smith Kline & French Foundation has contributed $43,000 to eight medical schools for use by newly appointed deans and department chairmen. The grants may be used for whatever new programs the appointees might wish to introduce.

The Foundation is the educational and scientific trust of Smith Kline & French Laboratories, the prescription drug firm. Recipients of the grants are:

The Chicago Medical School, Dr. Daniel S. Kushner, Dean, $5,000; Hahnemann Medical College and Hospital, Philadelphia, Dr. J. W. Cole, Chairmen of the Department of Surgery, $4,000; Loyola University, Stritch School of Medicine, Hines, Illinois, Dr. Peter J. Talso, Chairman, Department of Medicine, $5,000; Northwestern University Medical School, Chicago, James Hampton, Chairman, Department of Anatomy, $4,000; University of Arizona College of Medicine, Tucson, Marlin K. DuVal, Jr., Dean, $10,000; University of Iowa School of Medicine, Iowa City, Carl S. Vestling, Ph.D., Chairman, Department of Biochemistry, $4,000; University of New Mexico Medical School, Albuquerque, Dr. Reginald H. Fitz, Dean, $5,000; Woman's Medical College of Pennsylvania, Philadelphia, Glen R. Leymaster, Dean, $6,000.

Loyola University last month received a federal matching grant of $1,970,000 to assist in the construction of health research facilities in its new Medical Center planned for Hines (near Maywood) Illinois.

The grant, made by the Division of Research Facilities and Resources of the National Institutes of Health, Department of Health, Education and Welfare, was one of 48 awards totalling $29,492,365 to provide matching federal funds for health research facility construction and equipment. Thirty-nine other institutions in 24 states received grants.

According to Dr. John F. Sheehan, Vice President for the Medical Center and Dean of the Stritch School of Medicine, the funds will assist in the construction of 149,283 square foot area in the new Medical Center which will be devoted to basic and clinical research.

The Surgeon General of the United States makes these awards upon the recommendation of the National Advisory Council on Health Research Facilities comprised of leading nongovernmental scientists, research administrators and others experienced in assessing health facility needs of institutions throughout the nation.

A project to determine why patients with cancer, leukemia and other diseases have abnormally large amounts of carbohydrate-containing protein in their blood is in progress at the University of Illinois College of Medicine, Chicago.

The project has been supported since 1962 by the Leukemia Research Foundation which recently awarded an additional $8,500 to continue the research.

Larger than usual amounts of glycoprotein —proteins containing corbohydrate—are found in the blood of patients with leukemia, cancer or certain other diseases involving inflammatory reaction.

The researchers are, therefore, trying to determine the mechanisms and reactions involved in glycoprotein formation in the liver.

By using radioactive glucosamine, a carbohydrate which is incorporated into blood glycoproteins, the scientists can study the processes by which glucosamine gets built into serum glycoprotein of rats. Once these processes are understood, they hope to shed some light on why the processes are increased in disease.

NEWS and ANNOUNCEMENTS

Hundreds of children with neurological and sensory disorders will have improved treatment and services as the result of a $35,000 Public Health Service grant which has just been awarded to the Pediatric Neurology Service at the University of Illinois Research and Educational Hospitals in Chicago.

Since it was established in July, 1962, the Service has served as a center to which practicing physicians, educators and agencies can refer children for evaluation and management of neurological and sensory disorders.

With one full-time physician, Dr. Gerhard Nellhaus, the Service's out-patient clinic recorded 260 new patient visits and 1,300 follow-up visits in a one-year period. During this time, 174 children were also admitted to the Service's 14 medical and surgical beds. At present clinic load is so great that initial appointments for less urgent cases have to be made months in advance.

The grant will permit the Pediatric Neurology Service to have additional part-time physicians, a full-time social worker, a full-time clinical psychologist, an EEG technician, a public health nurse, and a secretary.

The increased staff will make possible long-range therapy and planning for children with behavioral and learning difficulties resulting from neurological and sensory disorders.

Approval of applications for grants to hospital construction projects throughout Illinois were announced last month by the Illinois Department of Public Health. The approvals followed recommendations of the Illinois Advisory Hospital Council which met Thursday with Dr. Franklin D. Yoder, state health director, to consider applications for projects.

Funds are made available to public and other non-profit institutions through the Illinois Department of Public Health under the Hill-Burton Program, a federal grant-in-aid program. Action on the final appropriation for the program is pending in Congress.

Grants recommended by the council and given tentative approval by Dr. Yoder for construction during this fiscal year, with amount of grant not yet determined, include five general hospital projects: St. Joseph Hospital, Breeze; Douglas County—Jarman Memorial Hospital, Tuscola; Burnham City Hospital, Champaign; Carle Memorial Hospital, Urbana, and Morris Hospital, Morris.

Other projects approved were a school of nursing building at Graham Hospital, Canton, and a public health laboratory equipment grant for the Chicago Board of Health.

Seven skilled nursing homes were also approved. They are: Methodist Home, Lawrenceville; Graham Hospital, Canton; Way-Fair, Inc., Fairfield; St. Joseph Hospital, Breese; Alton Memorial Hospital, Alton; Knox County Nursing Home, Knoxville, and Harbor Crest Home, Fulton.

Two diagnostic and treatment centers for out-patients at Oak Park Hospital, Oak Park, and Northwestern Medical School Clinics, Chicago, were approved.

A chronic disease hospital unit was approved for grant to be constructed at the Louis A. Weiss Memorial Hospital, Chicago.

A rehabilitation center facility was approved for grant to be constructed at Oak Park Hospital, Oak Park.

The Monmouth Hospital, Monmouth, applications to construct a new general hospital and nursing home were endorsed by the council with the approval of grant dependent upon the availability of sufficient grant funds this year.

The council recommended that final decision on three applications be deferred until further information could be obtained. Applications deferred for this reason were: St. Joseph Hospital, Bloomington; Brokaw Hospital, Normal, and Community Memorial General Hospital, LaGrange.

The applications considered for grant have a total estimated construction cost of $48,793,264. Costs in excess of the federal grants will be provided by the project sponsors.

Final approvals and allocations of grants are subject to appropriations by Congress. The Illinois plan was approved by the council and will be submitted to the U. S. Public Health Service for acceptance.

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Milton A. Dushkin, M.D.
MEDICAL DIRECTOR

PASSAVANT'S EYE SERVICE EXPANDS N.U. CENTER'S CARE AND RESEARCH

Use of a new precision instrument at Passavant Memorial Hospital combines simplified treatment of eye patients with research into the optic effects of atomic radiation. The instrument, called a photo coagulator, expands the Passavant retinal service of the Ophthalmology Department of Northwestern University Medical Center into a broad program of treatment and research of the eye.

The treatment phase replaces certain eye surgery procedures with a technique so simple that the patient usually does not remain in the hospital overnight.

The retina of the eye is paper thin and it can not be sewed together when it is torn. The photo coagulator, by giving off an intense beam of light, coagulates or burns the tear in the retina as sunlight coagulates or tans the skin. Before this instrument was developed, the doctor had to enter the eye from the rear and create a scar by means of surgery. The new approach is from the front through the pupil minimizing damage to surrounding tissue. If the retina is completely detached, then surgery is required to replace it, but the coagulator may be used later to seal residual tears.

The patient lies on a wheeled cart, rather than on an operating table, in a laboratory room reserved for the purpose and is treated by the doctor who is assisted by a nurse aide. This streamlined method reduces the hospital charge from approximately $300 for a week's stay (depending on accommodations) to about $50. This does not include doctors' fees.

The service is staffed by Dr. David E. Shoch, assistant professor of ophthalmology at Northwestern, and Dr. J. Graham Dobbie, clinical assistant of ophthalmology, under the direction of Dr. Derrick T. Vail, professor of ophthalmology and chairman of the department at Northwestern. All are members of the Passavant medical staff.

While the primary purpose of the photo coagulator is to repair a torn (but not detached) retina, it has several other uses. The instrument will destroy small tumors in the eye. The beam can be so delicately controlled that it covers an area measured in millimeters. Another advantage in the use of the photo coagulator as compared to other forms of radiation therapy is that there is no risk of damage to other ocular and surrounding structure.

Use of the coagulator often can be substituted for another operating room procedure, the iridectomy, or surgical removal of a part of the iris by cutting. In the past an iridectomy was performed to open a pupil that had been drawn together by disease. Now the occluded pupil can be opened by directing the coagulator's beam and burning a hole to permit the transmission of light.

Another use of the instrument is to stop hemorrhaging from small aberrant blood vessels in the eyes such as occurs in persons with diabetes.

Passavant doctors estimate that some 200 patients a year will be treated with the instrument.

The photo coagulator will serve a valuable function in research. The eye physicians will use it to study degenerations that occur along the optic pathway leading to the brain such as those produced by radiations from the atom bomb. The doctors will search for ways to treat and control experimental burns which the device can produce in the eyes of rabbits. The coagulator will cause damage to the retina similar to that produced by looking at a solar eclipse. In fact, knowledge of ecliptic burns led to the development of the photo coagulator.

The photo coagulator was made by the Carl Zeiss Company, German manufacturer of precision instruments. The cost of $15,000 was shared equally by Northwestern University, Chicago Wesley and Passavant hospitals.

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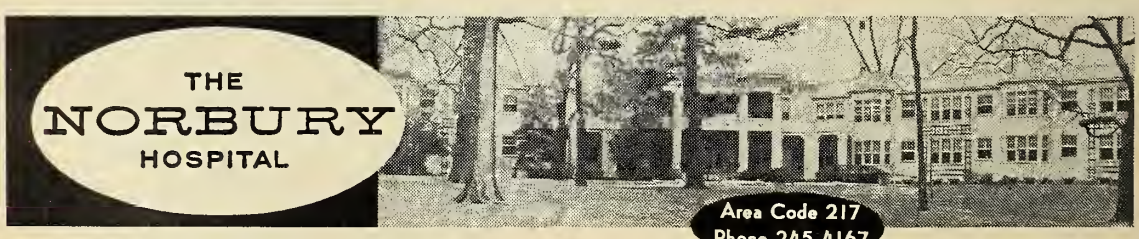
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Obituaries

Paul B. Casebeer, Brocton, died June 25, aged 66. In 1922 he was a graduate of Indiana University School of Medicine.

Paul G. Dick*, Westchester, died October 10, aged 77. A graduate of the University of Pittsburgh School of Medicine in 1911, he specialized in radiology and practiced in Chicago for 55 years. He was a member of the fifty year club of ISMS.

William P. Fread*, Ottawa, died September 19, aged 86. A graduate of Hering Medical College, Chicago, in 1903, Dr. Fread specialized in eye, ear, nose and throat practice. He was an emeritus member and a member of the fifty year club of ISMS.

Joseph D. Halpert*, Chicago, died September 12, aged 78. A graduate of Loyola University Medical School in 1916, he specialized in pediatrics on the staff of Mount Sinai hospital.

Myron I. Ingram*, Chicago, died September 25, aged 70. A graduate of Chicago College of Medicine and Surgery in 1917, he was a staff member of Edgewater hospital.

George H. Joost*, De Kalb, died September 5, aged 69. He was a graduate of Northwestern University Medical School in 1920 and a general surgeon.

Samuel Metcoff, Chicago, died September 7, aged 83. A graduate of Dearborn Medical College in 1904, he was on the medical staff of Metropolitan Life Insurance for 35 years.

Isidore S. Polishuck, Chicago, died September 18, aged 82. A graduate of Chicago College of Medicine and Surgery in 1917, he retired in 1954 after 35 years on the Chicago board of health. He had also been a resident staff member of Manteno State hospital.

Maurice V. H. Puckey*, Chicago, died September 21, aged 85. A graduate of Jenner Medical College in 1910, Doctor Puckey had been on the staffs of Ravenswood, Illinois Masonic and Illinois Central hospitals. He was an emeritus member and a member of the Fifty Year Club of ISMS.

Edward Ross*, Batavia, died October 24, aged 56. A graduate of the University of Illinois College of Medicine in 1932, he specialized in psychiatry. Former superintendent of Manteno State hospital and consultant for six Illinois prisons, Dr. Ross was owner and superintendent of the Bellevue Place and Round Lake sanitariums at the time of death.

Martha Sollner*, Chicago, died August 3, aged 63. In 1925 she was a graduate of Medizinische Fakultat der Universitat, Wien, Austria, and specialized in obstetrics and gynecology.

Lawrence J. Wilhelmi*, Joliet, died October 3, aged 72. A graduate of Rush Medical College in 1923, he specialized in pediatrics.

**Indicates member of Illinois State Medical Society.*

IMJ

Illinois Medical Journal

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References: 1. Brown, T. T.: The Enigma of Drug Addiction, Springfield, Ill., Charles C Thomas, 1961, pp. 287-334. 2. Chesnick, R. D.: Med. Times 90:247 (March) 1962. 3. Narcotic Addiction Symposium: New York Med. 18:562 (Aug. 20) 1962.

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AS I SEE IT FROM '360'

By Robert L. Richards
Executive Administrator

THE GIFT OF LIFE

This is the gracious season of giving, of a renewal of man's faith and the miracle of good fellowship and charity. It is therefore proper and fitting that we put down our daily problems during this gracious season and reflect on the year's accomplishments. It is these accomplishments that should act as fodder for our plans and activities in the new year.

Certainly, one of the most inspirational examples I saw recently is contained in the following report:

Aged, blind psychiatric patients—admittedly the most hopeless prospects possible for rehabilitation—have made significant progress in a "comeback" program developed at the Danville Veterans Administration Hospital.

Continuing goal of the pilot program is to increase physical dexterity and self-care. Indicative of progress is that during the past eight months of specialized therapy, only one of the blind patients has suffered a bruise or cut through accidents such as failure to avoid obstacles or inability to care for himself. Key participants in the project were therapists of the hospital's Physical Medicine Rehabilitation Service and Nursing Service personnel, and 14 Red Cross volunteers, performing what certainly has been the hardest assignment ever given a volunteer at the Danville hospital. Their's is the story of dedicated work.

The program began in March 1964, with 14 totally blind veterans. It has since been extended to six more. All are more than 60 years old and have been hospitalized for more than 20 years.

Under the training program, each patient is being taught to use his hands and to find new interests in occupational therapy; to relax and socialize in recreational therapy; and to improve his mobility in physical therapy.

Happiest moment in the project came for two Gray Lady volunteers and a patient named Pete who, some years ago, had undergone a lobotomy.

For ten weeks Pete had shown no response whatever to any request but the volunteers had gradually become familiar to him and had ignited a spark of interest.

If caught fire this day when one volunteer asked him if he would shake hands with her. Without hesitation, Pete put out his hand. The other volunteer, thinking it might be a coincidence, said, "Pete, I am across the table from you. Will you turn around and shake hands with me?" He turned around and shook hands with the second volunteer.

"You would have thought from our congratulations that Pete had just learned to read Braille," commented one of the volunteers.

As this little story reflects the highest ideals and dedicated service of medical practice and care, may it consequently serve to guide the activities of every ISMS member throughout the coming year.

MEDICAL SCIENTISTS FOUND some strong evidence for the viral theory of human leukemia in 1964, stirring hopes for early proof of a virus-leukemia relationship and providing some of the year's top medical news stories.

A review of medical headlines in 1964 shows that other virus hunters made news, too. Investigators of viral hepatitis, for example, were heartened by a report that human hepatitis virus had apparently induced disease in a laboratory animal. If the work is substantiated, a long-needed break in hepatitis vaccine research would seem to be near.

SEARCH FOR VIRUSES IN HUMAN LEUKEMIA HIGHLIGHTS YEAR'S MEDICAL NEWS

Still other medical news in 1964 was made by:

—the harsh judgments on cigaret smoking rendered by the Public Health Service Surgeon General's Advisory Committee on Smoking and Health.

—emergence of the optical maser, or laser, as a potentially powerful weapon against some types of cancer, and ultrasound as an important diagnostic tool.

—the American Medical Association and the Food and Drug Administration as they began to trade information on drugs and drug therapy in a new program of cooperation and computerization.

—encephalitis of epidemic proportions in Texas and New Jersey, with a scattering of cases in several other states.

One of the most dramatic developments in the virus-leukemia story came from England. Dr. Michael A. Epstein and colleagues of the Middlessex Hospital School in London reported the first apparent transmission of human cancer to laboratory animals, and apparent success in growing a virus-like particle that is assumed to cause the disease.

The investigators said that African green monkeys developed apparently typical Burkitt lymphomas within two years after being inoculated with suspensions of fresh lymphoma cells from human patients. The Burkitt cells also were established in cell culture where they elaborated a small quantity of virus-like particles. Burkitt lymphoma is a leukemia-like disease of the tissues which produce white blood cells. Named after the British surgeon who recognized it in 1958, it occurs among children

in limited areas of tropical Africa and may be transmitted by insect bites.

The possibility of transmission by insects is a strong argument for a viral cause of this particular form of human cancer. Probably only some infective agent, such as a virus, could be carried by insects from a Burkitt lymphoma victim to a previously unaffected person. It isn't likely that lymphoma cells could be transmitted by insects from one person to another. Neither is it likely that human lymphoma cells, rather than some agent carried by the cells, were responsible for the apparent disease produced in laboratory monkeys; human cells inoculated into monkeys are probably quickly destroyed by the monkeys' immunologic defenses.

Human leukemia cells yielded viruses or virus-like particles to several teams of investigators during 1964, raising hopes that further study will pin down a relationship between the particles and the disease. Proof of a relationship has been elusive, though, and some scientists think it could remain so for a long time.

Investigators have been testing the viral theory of leukemia in animals for more than 50 years, ever since the discovery of fowl sarcoma virus in 1911. Fowl and mouse leukemia have been studied intensively, and attention also has been paid to leukemia in rabbits, hamsters and other animals. Viruses have been isolated in several instances and both fowl and mouse leukemias have been transmitted in the laboratory by means of cell-free filterable material. But, as the British medical journal "The Lancet" pointed out editorially this year, "it is fair to say that the immense expense of effort, time, and treasure on the study of fowl and mouse leukemias has brought little help to our understanding and management of human leukemia."

Among the 1964 reports of virus isolations from human leukemia, those which excited medical interest included:

—Work by Dr. G. Negroni of the Imperial Cancer Research Fund, London, in which tissue-culture techniques were used to isolate a virus from the bone marrow of 10 out of 25 leukemia patients. The virus, which produced cytopathic (injurious to cell) changes in tissue-culture cells, was photgraphed by electron microscopy and was said by Dr. Negroni and colleagues to resemble viruses recovered from mouse and fowl leukemia. Serum from leukemic patients weakly neutralized the virus, but the virus produced no disease when inoculated into newborn mice, hamsters and ferrets.

—The production of what appeared to be pre-leukemia symptoms in monkeys which had received injections of virus particles obtained from leukemia patients. This work by scientists at the U.S. National Cancer Institute gains in potential importance when seen in the light of Dr. Epstein's apparent success in transmitting Burkitt lymphoma to monkeys.

—The production of a fatal leukemoid disease in mice with virus-like agents isolated from the bone marrow of leukemic children. Dr. William H. Murphy and colleagues of the University of Michigan, Ann Arbor, concluded after carrying out antibody and other tests that an association could be suggested between the virus-like particles and leukemia in children.

The burst of new knowledge in leukemia research has prompted the National Cancer Institute to push a new multimillion-dollar research program with funds voted by the U.S. Congress. Immediate aims of the program will be to use new leukemia cell-culture techniques to grow suspected leukemia viruses on a large scale for detailed investigations, to develop other investigational tools, and to organize teams to carry out epidemiologic studies.

Because many of the leukemia-associated viruses appear to be related antigenically and in appearance, some thought has been given to the possible future preparation of a leukemia vaccine. If a specific virus is involved in the development of leukemia, it should be possible to produce a vaccine to immunize human beings against the virus. Most leukemia investigators hesitate to talk about a vaccine, however, pointing out that production of one is probably many years away, if it proves possible at all. Too much talk of a vaccine at this point in leukemia research, they say, only serves to uselessly and cruelly raise the hopes of leukemia victims and their families.

In the case of infectious hepatitis, a disease of proven viral origin, a vaccine may actually be on the horizon if work carried out in 1964 is substantiated and extended. Again, even with luck, a vaccine suitable for extensive use would probably be years in the future.

As in leukemia research, hepatitis research

has been hampered by the fact that animals used in the laboratory were not susceptible to forms of the disease which occur in humans. Full-scale investigation of a disease and preparation of vaccines require large numbers of susceptible animals for use in experimentation.

A cautious report that the first susceptible animal may have been found came this summer from investigators at Tulane University's Delta Regional Primate Research Center in Louisiana. A West African monkey—a member of the species Erythrocebus patas—developed what appeared to be hepatitis after she and eight others were inoculated with a virus strain obtained from a human hepatitis victim.

Primate Center researchers almost immediately began to design a larger experiment, using 150 patas monkeys, to determine whether the results of the smaller experiment could be repeated. Military and public health authorities are watching with interest. Infectious hepatitis is the severely debilitating and sometimes fatal disease which strikes in 7-year epidemic cycles in the United States and constitutes one of the gravest health hazards to American military and civilian personnel in Southeast Asia.

Infectious hepatitis is not to be confused with serum hepatitis, a less frequent disease but one more likely to be severe. Whereas infectious hepatitis is usually transmitted by viral contamination of food or water, serum hepatitis is contracted when virus-containing blood or plasma comes into contact with the bloodstream of an uninfected person. Transfused blood and unsterilized hypodermic needles are common carriers of serum hepatitis virus. Whether the viruses of infectious and serum hepatitis are identical or different is a question debated hotly by investigators.

The person who pondered the relationship, if any, between smoking and lung disease was not alone in 1964. On January 11, the Public Health Service Surgeon General's Advisory Committee on Smoking and Health reported on its comprehensive review of the scientific literature.

The committee members said they found a statistical relationship between smoking, particularly cigaret smoking, and several respiratory diseases, lung cancer included. The findings of the report had been anticipated, but seeing them in black print caused a worried smoking public to become even more apprehensive. A flurry of concern also was touched off in the medical profession and among cigaret manufacturers and various government agencies.

In late 1963, just prior to release of the report, the American Medical Association took action recognizing the magnitude of the smoking-and-health controversy. It announced that its Education and Research Foundation would sponsor studies aimed at determining: (1) which important human ailments are caused or aggravated by smoking; (2) how they may be caused; (3) the particular element or elements in smoke that may be the causal or aggravating agent, and (4) methods for eliminating any such agent. The AMA Board of Trustees appropriated $500,000 to launch the program and later 6 major tobacco firms made an unrestricted five-year grant of $10,000,000. The AMA Education and Research Foundation disburses the money to independent investigators; the AMA itself does none of the research. By the end of October, 28 grants totaling $1,041,804 had been made.

The concentrated light beam of the laser burned a place for itself in medical news during the year when it was used for experimental treatment of melanoma, a highly malignant form of skin cancer. Reports told of the treatment of 3 patients at the Pasadena (Calif.) Foundation for Medical Research and one patient at Tufts-New England Medical Center in Boston. The laser (light amplification by stimulated emission of radiation) is an instrument in which crystalline ruby or some other substance is used to amplify a light pulse and concentrate it into a tight beam of coherent frequency. Although results of the treatment were good, destroying more than 99 per cent of a tumor in one instance, investigators at both institutions said they will probably regard the laser as an experimental anti-cancer weapon for some time to come.

Ultrasound, on the other hand, has already moved into the hospital as a diagnostic tool. Diagnosis by ultrasound is based upon the same principle as sonar, the technique used by the Navy to detect submarines by bouncing sound waves off their hulls. In medicine, high-frequency sound waves are transmitted into the human body by special equipment, which also detects the echo of waves bounced off organ

walls or bones. The time lag between transmission and echo serves as a measurement of tissue density. Since every tissue has a characteristic density patetern as measured by ultrasound, deviations may indicate a disease process.

Although ultrasound diagnosis is used in place of x-ray diagnosis on occasion, it is generally regarded as a supplement to x-ray rather than a replacement.

So far, ultrasound diagnosis has proven useful in scanning the liver and other internal organs, in echoencephalography to detect bleeding or other space-consuming pathologic processes in the brain, and in certain obstetric examinations. At Walter Reed Army Medical Center, an ultrasonic probe coupled with a surgical extractor was used to locate and remove a piece of brass cartridge casing from a child's eye. The operation, which would have been impossible without ultrasound, was the first clinical use of the instrument designed by Dr. Nathaniel Bronson of the Southamptom Hospital, Long Island, N.Y.

The thalidomide incident of 1961 continued to echo in 1964 with the announcement of cooperation between the American Medical Association and the Food and Drug Administration. Cooperation will center for the present around adverse drug reactions, an area of major medical and public concern since a supposedly harmless drug, thalidomide, proved to have a powerful deforming effect on human embryos.

The task of receiving adverse reaction reports will be split between the AMA and the FDA, and significant information exchanged on data-processing cards. Separate reporting systems formerly maintained by each organization will be abandoned, doing away with unnecessary duplication. Data-processing equipment is being installed which can program information for exchange and for maintenance in permanent files.

The AMA file will be maintained by the Central Registry of Adverse Reactions to Drugs and Chemicals. Expanded steadily in the post-thalidomide years, the Registry's function is to: (1) gather information furnished voluntarily by doctors, certain hospitals and other sources on possible reactions to drugs, pesticides, and household and economic chemicals; (2) evaluate these reports, and (3) inform the medical profession promptly as to the nature and significance of reactions to toxic or potentially toxic agents. The FDA information file, while complementing that of the AMA's, will not serve the same primary purpose. The FDA's chief function is to regulate drug safety and efficacy, whereas that of the AMA's is to educate and inform the physician.

In final planning stages is a registry of pathologic specimens from adverse drug reaction cases, to be maintained at the Armed Forces Institute of Pathology, Washington, D.C. Cooperating in furnishing cases will be the AMA, FDA, and the Pharmaceutical Manufacturers Association. The file is expected to be of value to investigators studying the pathology of adverse reactions, and to clinicians dealing with suspected but undiagnosed reaction cases.

In some sections of the United States the medical news of the year was an epidemic. Infectious encephalitis, a viral disease believed transmitted in many cases by the bites of mosquitoes, appeared in epidemic proportions in parts of Texas and to lesser extents in Kentucky, Illinois and Colorado. Some Texas cities and especially Houston were hard hit in mid-summer; Houston undertook an intensive insect spraying program in an effort to reduce the mosquito population. By autumn the Texas epidemic and Midwest outbreaks appeared on the wane, but a new series of cases was beginning to grow in New Jersey. The U.S. Public Health Service said the New Jersey cases seemed to involve the same virus—St. Louis type—that was associated with the Texas epidemic.

PLAY IS A CHILD'S WORLD AND ENTERTAINMENT, but it also serves to stimulate the growth of his physical, mental and social abilities. For this reason, a careful selection of playthings — especially at Christmastime — is an important part of parental responsibility.

Toys should stir the imagination, encourage creative ability, and train the child for better living. Parents should not assume that toys are frills for children. They are a vital contribution to their growth, necessary all 12 months of the year and not just on Christmas morning. Some toys serve their purpose in a child's growth and are abandoned, but many toys have a long-span appeal, and continue to hold interest all through childhood.



DANGER— DO NOT OPEN ON CHRISTMAS

Norman J. Rose, M.D.
/springfield

Reprinted by popular request, from the November 1962 issue of IMJ.

Children should not be over-burdened with toys that require constant adult supervision, that encourage dependence on the parent because they are too complicated or because they are not suitable for this child today. Toys should be selected which are appropriate to the a) age, b) interest, and c) mental and physical abilities of the child.

In purchasing toys, the adult should read the tags, booklets, and brochures which many enlightened toy manufacturers are putting out today. In a few words they usually give a sound course in child development. Wise selection of toys is not enough. Some parental teaching or supervision is a second important step. An air rifle, archery set, dart game, sharp knife or chemistry set may become dangerous in the hands of children too young to understand the hazards involved. Even older children should have adult supervision with play equipment of this type.

Babies and toddlers invariably follow the rule, "from hand to mouth" for everything they handle, hence care should be taken to see that they do not play with small toys, marbles, coins, beads, or any small object, as well as playthings which have parts which may become loose and find their way into the mouth. Stuffed animals with button eyes, which may become loose, whistles with removable mouth pieces, pull-toys with small removable parts are all dangerous. Nearly 600 children under five years of age die each year as a result of suffocation

by ingested small objects. Parents should see that playthings are sturdy and well made. Cheaply constructed or breakable toys will come apart or be broken under strenuous child play, leaving jagged edges which may cause cuts and infection. Playthings with sharp edges or pointed ends should be avoided. Toys should be bent a little to see whether bending a lot by the 4-year old will destroy it.

Electrical toys of any type are unsafe for very young children. For older children, only those which bear the seal of approval of the Underwriters' Laboratories should be selected. Children should be taught how to play with all electrical toys. Electrical play equipment should be inspected regularly for frayed cords or any defect which may cause shock. Children should be reminded never to play with electrical equipment with wet hands or damp clothing.

Storage of play equipment is an important matter which parents should consider while a child is very young. Serious falls often result because playthings are left on steps, stairways, walks, or in the yard or home. If a proper place is provided by parents for storage of toys, such as a toy chest, or open shelves within reach of the child, and the child is taught to put away playthings when play time is over, many serious falls will be avoided. The habit of orderliness developed by supervision early in life will carry over into later life.

The National Safety Council, as a result of studies on Toy Safety, indicates that some of the more hazardous toys which have caused fatalities are bags, buttons, balloons, bullets, bows and arrows, sharp and pointed objects, and toys which break apart easily. From this list, it is obvious that toys which can be mouthed by small children such as buttons, plastic bags, rattles, and balloons are apt to choke or suffocate, and that for young or old, any weapon which shoots is a hazard and should be used with respect if at all.

Christmas time also brings hazards from Christmas trees and other decorations, such as **Christmas Tree Bubbling Fluid** — containing methylene chloride; **Fireplace Colors** — made of metallic salts (copper, barium, selenium, lead, thallium, arsenic and antimony are common ones) which produce vari-colored flames when thrown into fireplace; **Snow Sprays** — with the danger of inhalation of propellants which are halogenated hydrocarbons (methylene chloride, freons); **Icicles** — metallic foil streamers usually containing a mixture of metallic tin and metallic lead; Holly Berries; Candles, Defective Electrical Cords on Christmas tree lights or other decorations, etc.

Another hazard of the holiday season is the danger due to the large amount of aspirin used by adults during this season, frequently leaving the container in reach of small children (aspirin is the cause of one-third of all accidental poisonings in children in the age group four years and under).

Christmas-time should be a happy time. Let's keep it that way by giving special attention to toy safety and avoiding the hazards associated with Christmas decorations.

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MEDICINE-RELIGION SYMPOSIUM

SPIRITAL NEEDS OF THE SICK

Harold B. Haley, Jr., M.D.
/chicago

Moderator of this symposium and President, Chicago Chapter, Catholic Physicians' Guild.

This symposium was sponsored by the Committee on Medicine and Religion of ISMS and the Catholic Physicians Guild of Chicago and was presented at the 124th Annual Convention of the Illinois State Medical Society, May 19, 1964.

PEOPLE—INDIVIDUAL PEOPLE—SICK PEOPLE—PATIENTS—these are our subject this evening. A person is born, lives, suffers, may be ill, and will die. His mission in life is to live so that at death he will go to God. In the human person are united a physical reality and a spiritual reality—body and soul. When a person is ill both are involved. The care of body and soul cannot be separated. Man and men have always recognized this essential union and lived by it. In ancient and in aboriginal peoples, priest and healer were one. For that matter, the modern equivalent of the old witch doctor is unfortunately still with us. King Solomon, primarily thought of as a political and religious leader, is alleged to have written books on medicine and pharmacology. The first hospitals were established by religious organizations. Our early great writings emphasized the body and soul and the religious aspects of healing. The Talmud contains many medical and hygienic references. It is all probably summed up in Deuteronomy when God tells Moses, "I am the Lord and it is health I bring thee."

This, then, is the patient. Our problems are the relationships between patient, his physician, and his clergyman. The patient has a viewpoint, so does the physician, and so does the clergyman. The physician has two viewpoints to consider—his own and the patient's. The physician has his own religious beliefs. In the care of a patient the patient's beliefs must be considered primary as long as the physician's conscience is not compromised. In a recent issue of one national publication there is a magnificent article on psychiatry and religion by Franklin Ebaugh which has broad applications to medicine in general. In this he states, "Whatever our

personal leanings, we must care for the patient within his own faith, for that faith is an essential part of his 'psychological life space,' both inner and outer." Ebaugh opens the article with this statement which defines one of our problems: "Too often, in his quest for well-being as a total person, the religiously oriented patient feels that he is faced with a choice between his faith and his doctor, for he has no assurance that the tenets of medicine and religion are consistent with one another."

This helps define a major area of this particular discussion: "What is the role of the physician and what is the role of the clergyman in caring for the spiritual needs of the patient?"

We've described the patient and his spiritual orientation and outlined some problems in his care. These lead to exploration of solutions—these would seem to include dedication, understanding, and communication. Dedication we assume we all should have, understanding we should all be working towards, communication we'll talk about tonight.

Reverend Thomas will discuss the pastoral care of patient needs. Dr. Rhoades will discuss the help the physician can get from the clergyman and the responsibilities of the physician in these same areas. Rabbi Prombaum will explore the relationships of and between individuals in patients of the Jewish faith. Father Marren will probe the areas of communication between patient, physician, and clergyman. Throughout, various specific problems will be examined from different viewpoints. These will include the seriously ill patient, preparation for death, counseling in general, and relationships between clergymen and doctors.



THE PASTORAL CARE OF PATIENT NEEDS

The Rev. Meredith Thomas
/mattoon

Pastor, First Baptist Church, Mattoon, Illinois.

To define the spiritual needs of a patient is not a simple task. The needs of a patient in the midst of his physical or mental illness are so "inner-and-outer" related in terms of the interplay of physical, social, mental and spiritual entities that one cannot easily compartmentalize or isolate those things which are "solely spiritual". G. K. Chesterton years ago lamented the lack of any standard outline of the soul. Therefore, to say a patient's needs in spiritual matters can be itemized as one, two, three, four and so on is to fall victim of the Cartesean dichotomy which still lingers in our respective professions.

When a patient lies stricken with a serious physical disorder, which may terminate his life quite quickly, it would seem that the inner or "spiritual needs" of this person revolve around the ageless issues of religion; the soul's relationship to God, judgment, forgiveness and the life to come. To some individuals these alone are the spiritual needs of any man, yet does this recognize or meet the breadth of a patient's total needs in the days of recovery or in the days of his dying. For the man who is

seriously ill and who is faced by a physical or mental crisis may soon be engulfed in a series of rather "unspiritual things" which can shake the foundations of his being.

Therefore, do I as a clergyman have any ministry to that person who is cut off from the support of his home, cast into the indignities of an institutional world and is forced to face an uncertain tomorrow in terms of disability or adapting to a new way of living? Or are these areas of man's life unrelated to the soul and to a clergyman's concern? Can I only relate my pastoral ministry to—"pre-operative prayer" or to call endlessly on the chronically ill or stand by the dying?

Several months ago when a surgeon called me and said, "I've done all I can for Mrs. R. Frankly, she should have left the hospital today, but she has no will to live. I believe you can help her."

(How often we forget that good physical or chemical therapy does not guarantee the restoration of a patient to full health even though diagnostically everything seems perfect concerning the physical and mental.)

I again called on Mrs. R. and mentioned the fact that this was the day she should have been released. After a long silence she spoke curtly and with a broken heart. "Pastor, they sold my clothes. The girls of my club had a rummage sale and didn't keep one dress for me. They figured I wouldn't need any clothes." One dress—one blue dress, stood between this woman and restoration. She was at traditional peace with God, but her wholeness was impaired by some friends' short sightedness. After a few phone calls, several visits and apologies, her health was attained. Her needs were the sacraments of human love and care. Prayers and Scripture never could have done what honesty and reconciliation accomplished.

This case points up one whole area which will rule much of the clergy role in his ministry to the patient. As clergy we are seldom equipped with enough information to understand intelligently and quickly what our role in the healing or helping of the patient will be. To be sure, the average man is seldom as God orientated when he is on his sick bed. But how much information from the physician do I really have concerning the physical or mental condition of the patient? What clergy can do in terms of ministering is often handicapped right at this point. Also as a minister I face the question of how well do I know this person—face to face—and his faith, and how well does the patient know my role and ministry.

As a clergy I am enjoined by the Word of God to minister to the sick as the Gospel of St. Matthew records, "I was sick and ye visited me." Yet there is little unanimity amongst the clergy on how one should interpret this ministry, which in part is due to a great variance over the clergy's conception of what the "spiritual needs are" of a patient.

Many clergy look upon hospitalized patients as potential prospects for their church roles or individuals who need to be evangelized. Such clergy as these come with a tract, a tape recorder and a testimony followed with a pious prayer or admonition to get right with God.

Other clergy see ministering to spiritual needs of the sick to be so proscribed by a traditional authority. They only do what the Bible or their particular church tells them to do; this, no more, no less.

Generally amongst the clergy there is the temptation simply to "pass the time of day", read a Scripture perhaps, and offer a brief prayer. Or simply lean in the doorway and say, "Hi"—and "Good Morning". Period.

The question in the large sense, of course, is this: Can part of the therapy the patient needs come from me? Is the health of the body a proper concern for the clergy or are we soul keepers only? Can we speak of faith's relationship to illness? Can we do good—purposefully—in conjunction with you of the medical teams or are we merely spiritual demerol?

The last six decades have shown that the clergy do have some growing insights and therapy which will be of good to the whole patient. There are areas where we can help in the restoration of the person who is the patient. One can label these areas "spiritual needs" if one so desires. These areas are:

The Hidden Things of the Heart. Each patient should have a chance to be heard out. To speak to some one who will listen about things long hidden from life's view, incidents and ideas that have come to mind during his long nights and tedious days. Often a patient finds that his mental suffering and fears are far more painful than his physical pain.

The Issues of "Life's Real Values". Each patient may discover areas of his life which have lost perspective to him. He may need the guidance and council of one who sees life as good and purposeful. (Often a patient's health will only be as significant as life's meaning is to him.) He may wish to frankly discuss pain and evil and his sickness and its relationship to life. (Not only with the clergy but with his doctor, too.)

A Purposeful Religion and Faith. Each patient needs to understand his faith, not as a guarantee of good days or a vaccination against bad times, but as a vital way to view all of life, to see life in a Biblical perspective. Prayer, Scripture and Holy Communion are prime factors at this point.

Each patient is usually burdened with enough sin and sorrow, that, he may need and want an opportunity to find forgiveness and restoration toward God and neighbor. The power of love and forgiveness, the hope of the promises of God has delivered many a man from the realm of "wish" to the reality of "will" in his struggle toward total health.

The Need of Someone Who Cares. Each patient needs and may not have a person who cares for him as a person, if you will—loves him as a fellow creature. One who comes to help in their world which may be filled with loneliness, bitterness or boredom. Someone who "breaks in" to this world and stands in a supportive relationship. A clergyman who invades this life as a friend (outside or within his role as religious counselor) has infinite value. Add to this the therapeutic value of a kind smile, a word of joy, a personal enthusiasm for life, an offer of aid, the loan of a good book, a story of joy and you have a short course toward the whole man's rehabilitation.

If we as clergy aid you in our mutual ministry of caring and curing of the complete man, even unto the prevention of this being a sickness unto physical death, let us also mutually so heal that we do not fail to restore this one to a life of inner health, for it would be tragic if we should understand all the various crises, comprehend the totality of the patient's needs and in the end loose the man, not to physical death, but to the realm of empty—purposeless living, to living death.

THE HELP A PRACTICING PHYSICIAN NEEDS FROM THE HOSPITAL CHAPLAIN

Paul S. Rhoads, M.D.
/chicago

Professor of Medicine, Northwestern University Medical School.



Surely all of us are aware that we do not treat diseases. We treat people *with* diseases—people endowed with body, mind and spirit. If we are perceptive doctors we quickly realize that if a disorder occurs in any one of these elements the others are inevitably affected. In our management of the patient we must not focus our attention exclusively on the single disorder that has made him seek help, but on the *whole* person. Often our ministrations must be extended to other members of his family and closest friends also. If our approach is so oriented, there are many situations in which we must seek the help of a spiritual adviser, just as we would enlist the services of any *medical* consultant. Let us examine some of these special situations.

1. Some patients are seized with a multi-

plicity of fears and a great sense of loneliness simply because they have been placed in a hospital. This is not true of every patient. But for many who have lived at a somewhat superficial level and have not come to grips with the serious realities of life, this sudden necessity to face a situation in which "the chips are down" is very frightening. In this setting many unfamiliar and sometimes painful procedures are being done in an impersonal way by many different people (and sometimes this impersonal approach is by the patient's own physician). For many, the unobtrusive visit of a man of God who comes for no purpose except to offer cheerful friendship and comfort is a tremendous boon at this time.

Even for a deeply religious person, who has developed the inner resources to meet life's crises with fortitude, the visit of the hospital chaplain or the patient's own minister will be a great comfort. It helps re-establish the familiar atmosphere in which he approaches the important problems of his life. There are other areas in which the help of the clergy is more urgently needed.

2. For instance, any patient who suddenly is face to face with a life threatening illness such as Staphylococcus septicemia, a severe myocardial infarct, a perforated viscus, etc. has the right to a visit from a clergyman if he desires it. Catholic patients will often demand it. Protestants and Jews usually will be deeply grateful for the opportunity if it is tactfully suggested to them. Patients, with good reason, are frightened by these catastrophic emergencies. Knowing that they are possibly facing death, the presence of a spiritual adviser to help both them in their extremity and the family so gravely disturbed also, becomes of urgent importance.

3. Some patients whose illnesses do not constitute immediate emergencies have inevitably fatal disease such as widespread cancer or incurable chronic disorders such as multiple sclerosis in which the prospect is for months or years of disability and suffering. If the patient asks . . . and he usually does . . . the physician has the obligation to outline the prognosis as truthfully and hopefully as he can. This revealing knowledge, though often simply a confirmation of the patient's fears, is often a devastating emotional experience. The clergyman, working with the physician, may in such situations be able to show the patient how even death may be faced with equanimity, and how pain may be born with fortitude. Such patients may be helped to an attitude of dependence on the Almighty that creates a tranquility of spirit never before realized in their lives.

4. When a patient dies, regardless of whether the event was sudden or long anticipated, it is a time of deep sorrow for his loved ones. The grief is hardest to bear when a child or young adult, just facing the richest experiences of life, passes on. The physician who has been caring for the patient cannot, at least *should* not, bow out of the scene at this time. He must explain as well as possible to the family what went on to cause the patient's death and to give what comfort and encouragement he can to the bereaved ones. But he usually should call the hospital chaplain or the patient's pastor too. It is here that he pastor . . . of whichever faith is indicated . . . can offer spiritual help beyond the capacity of the physician. Knowing that the physician cares personally enough for the one who has passed on and for those who are bereaved to suggest the ministration of the clergyman gives the family security and comfort both at the time of crisis and in later years as they look back on the painful experience.

5. The last area in which the hospital chaplain can help in an unique way is different from the ones previous discussed. It is in the rehabilitation of victims of chronic alcoholism and other illnesses which result from an individual's inability to cope with the stresses and strains of day to day living. Salter in his text on pharmacology stated,—"people become alcoholics because life hurts too much". All of us are familiar with the mortified and penitent alcoholic who after two or three days of sobering up in the hospital declares he will never touch another drop—and means it. It requires very little probing to establish that such persons are having great difficulty in finding the true significance of life and in making the adjustments in their family, business and social relationships that are necessary for happy existence. In their inadequacy they turn to alcohol or some other drug as the quickest way of shutting out the world they find so hard to take.

If the clergyman can be tactfully brought into the picture when the patient is in a receptive state, desperately needing a friend, he can

be of inestimable value. Let me say, at once, however, that the chaplain should in this situation act as a man of God—not as a pseudo-psychiatrist. Many persons with alcohol and other drug addictions do need psychiatric study and treatment, but they also need spiritual help. And the two are not the same. My personal belief is that alcoholics need first to know that the physician and minister regard them as important human beings who are not to be castigated and punished but to be understood. Here is an unparalleled opportunity for the minister to become first a sympathetic friend, then a gentle counsellor who will slowly lead the patient to a knowledge of the deeper values of life, helping him gain the spiritual resources which will allow him to cope with his problems rather then run away from them.

Summary

I have attempted to state that a physician often is treating a complex human being whose *total* physical and emotional problem may far exceed the particular physical disorder which led him to consult his doctor. Also the physician must be aware that no patient can be entirely separated from his environment. Hence the patient's relatives and close friends also must be considered in the patient's care. Since the total man is composed of body, mind and spirit, the help of a spiritual adviser frequently must be sought by the physician. Some of the vital areas in which the physician and clergyman should work together have been outlined. They include:

1. Help with the emotional adjustments of a patient who is frightened by the experience of serious illness and being suddenly thrust into an unfamiliar hospital setting.
2. Sudden and life threatening emergencies in which the possibility of a fatal outcome is very real.
3. Sudden confrontation of a patient with the fact of having a prolonged incurable illness with all the physical and mental suffering that this entails.
4. The shock and sorrow of persons close to a loved one who has just died in the hospital or home.
5. The need for friendly interest and religious counsel by persons with alcoholic and other drug addictions.

"I AND THOU IN JEWISH CHAPLAINCY"

Rabbi Ephraim H. Prombaum, D.H.L.
/chicago

Chaplain-At-Large Chicago Board of Rabbis.



It was very gracious of Chairman Dr. Haley to allow me to follow the other panelists in accordance with my request. Historically, the *full-time* Jewish Chaplaincy is a facsimile of the calling created by The Catholic and Protestant Hospital Movements. Therefore, by following the Christian Clergy in this presentation, one feels a sense of "historical sequence." Apropos of the sentiments expressed here that medicine and religion have a great area of mutual accomplishment, this goal can only be realized in the arena of the hospital. It is in this arena that outstanding research and progress in all aspects of "total patient care" is made and the *full-time hospital Chaplain* is in the best position to make himself available to re-

ceive the benefits of the program, and to transmit it to clerical colleagues in the pastorate and the pulpit.

The central thought expressed tonight came in the form of mutual agreement that greater cooperation between doctor and clergyman will vastly enhance the welfare of the patient. If this is all we have come here to express, than it is easiest for me to say "ditto" and sit down. It would be difficult to believe, however, that our select, professional audience, would be intellectually satisfied with what seems a benign and superficial statement of facts. The phrase "I and Thou" (the first part of my topic) was borrowed from the philosophy of Martin Buber. I have used it to indicate that we encounter each other and seek to express the highest striving of our spiritual essence *as well as our disagreements.* This calls for (among other things) a recognition of a "struggle for domination" between doctor and chaplain.

Historically, this goes back to earlier eras when hospitals were established by the church as part of its program of religious expansion. In those days the concept of therapy was theologically and philosophically oriented and the chaplain, as the representative par excellence of "The Divine Therapist", was held in higher esteem than the physician whose medical arts were of a more "human" order. The doctor was, therefore, "auxiliary" to the clergyman. With the coming of the Industrial Revolution and the Age of Science, the pendulum swung in the opposite direction. Today, the physician is the representative of the recognized forces of healing, and the chaplain is "auxiliary" to him. Our eminent doctor panelist tonight indicated that medicine cures the alcoholic *without* the aid of the clergyman. However, the latter can be "helpful" in the effort to cure the alcoholic. Examples could be multiplied to illustrate the fact that medical science feels a stronger sense of power and independence, which often results in the relegation of the chaplain or pastor to a secondary role in the healing of the patient.

It must be admitted at this point that the question of who is "primary" or "secondary" is not limited to physician-clergy relationships. Within medicine itself, the practitioner who deals with the "tangible" looks down on the practitioner of the "intangible". His own colleagues in medical research humorously characterize the psychiatrist as "an M.D. who can't stand the sight of blood". Thus, in removing the obstacles to physician-chaplain improved cooperation we must overcome two problems; a) the negative legacies of the historic past; b) the current prejudices that stem from an undue reverence for "tangible" therapy and a benevolent contempt for "intangible" therapeutics.

In conclusion, let us hope that the prognostications expressed tonight for happy future relationships on a larger scale between doctor and chaplain will be fulfilled. The time is ripe for the establishment of a time "I and Thou" relationship between us for the ultimate success of our mutual efforts for "total patient care".

THE PARTNERSHIP

As the body and soul are united in a living being, so must the physician be able to treat both. Proof of this lies in the placebo which so often cures because it is preceded by sympathy and given with kindness. When the physician begins his practice, his medical skills enter into an equal partnership with human understanding and a sense of the religious. This partnership cannot dissolve as long as he continues to practice medicine.



COMMUNICATION BETWEEN DOCTOR, PATIENT AND CHAPLAIN

The Rev. John Marren
/chicago

Pastor, Holy Trinity Church, Chicago.

THERE IS AN OLD EXPRESSION, "War is hell". I know it is and yet I think everyone will agree that many good things have been the results of war. Medicine has had this experience. In the stress of wartime many procedures were invented and many discoveries made in the care of the wounded and disabled that have been transferred to peacetime and amplified for the benefit of mankind. One good example would be the strides made in the field of cardiac surgery on the basis of the amazing things done in wartime in surgery, anesthesia and blood transfusions.

It was in the same crucible that it became more and more apparent how religion and medicine could work as a team to help the wounded, the sick and the dying, each in his own field. Our progress in bringing this same relationship to a peacetime application may be slower than the developments in cardiac surgery but it is definite and increasingly more apparent. If we could work so closely and so well in the stress of war, why should we not be able to do the same in the relaxed atmosphere of peacetime. It certainly should not be a matter of antagonism—"there is enough glory to go around for everyone."

When I think of how we worked together, I am reminded especially of an incident that happened in the early months of 1945 when I was an army chaplain. Our medical station was set up in a small barn in Germany and it was at night when a very badly wounded soldier was brought in, just about breathing and, even that, it seemed, only at times. He was from Kentucky, he was a Protestant boy, and the most we could get was a mumbled word every so often. The doctor was Jewish and trying his darndest to figure out what to do. The boy had had everything that he could be given, plasma, (the limit), drugs, immediate care. Finally the doctor said there was only one desperate thing to do. The boy had to have some fresh blood (and there was no blood bank!) Everyone was game, but only two of us had the same type as the boy. So the doctor took the blood painstakingly by syringe from myself and an aid man to this wounded boy. It got him to the point where the doctors felt they could transport him to a field hospital; so I don't know what the final outcome was. But I always remember that doctor because he had a flask and

he restored the aid man and myself to active duty right away with some of that fruit juice he had in there. We can work together!

And, just as medicine learned much from war, so did religion. In the seven months that our division was in the action of the war I took care of all the wounded and dying that passed through our clearing station—Catholics, Protestants, Jewish and no religion—and there were many days when our census ran to 400 cases. It is in wartime that religion can find out the brotherhood of man!

It is in working together that we can, each in his own specialty, contribute our share to help mankind in the way that the psalmnist pictures him:

What is man that you remember him,
the son of man that you care for him?

Little less than the angels have you made him,
You have crowned him with glory and with honor,

You have given him rule over your handiwork
setting all things under his feet. *Ps. 8*

There are problems to be solved in this relationship of medicine and religion, as in a marriage, but they can be resolved through a desire for understanding and a common dedication to helping mankind. The rewards in the way of benefits for mankind should make the effort worthwhile.

It is necessary that there be communication between the doctor, the patient and the chaplain. For one thing it is of paramount importance that there be a respect for the desires of the patient and a consideration for his background. Maybe I can illustrate this by speaking of an element of Catholic life that is very often misunderstood, even by some of our Catholics. Oftentimes in a hospital, when a patient is placed on the critical list, the clergyman of the religious affiliation of the patient is called and informed. Sometimes it may be stated this way in the case of a Catholic, "Call the priest and ask him to give last rites to so and so". No title could be more misleading than this one, or, for that matter, more disheartening to the non-Catholic who doesn't understand what this is all about. Now any opinions to the contrary notwithstanding, this is *not* a matter of the priest coming to give the "coup de grace" to the patient you've worked so long to help; it is not a sign to the patient that all hope is gone or that the doctors have given up. It is not hanging up the flag of surrender. Calling the priest does not mean that death is inevitable, anymore than oxygen, intravenous feeding, or any of the usual procedures in the care of a sick person signify that his case is hopeless.

This is an area where communication would foster healthier attitudes and relationships and Catholic clergymen would welcome any opportunity to dispel the misunderstandings about his work with the sick and dying. This could be done through talks to medical students.

A Catholic is convinced that the aids that Christ gave for salvation come to him in a way that he can perceive with the aid of his senses even though these helps are spiritual and supernatural. For instance, while Christ was on earth He worked many of his wonderful manifestations just by a word or a command, but in other cases he made his work apparent in some sensible way. Thus on one occasion with a blind man he made a paste of his spittle and some clay and put it on the man's eyes. Then he told the man to wash in the Pool of Silome and he regained his sight. So, in the epistle of James, we are told: "Is any one sick among you? Let him bring in the presbyters of the Church and let them pray over him, annointing him with oil in the name of the Lord. And the prayer of faith will save the sick man and the Lord will raise him up and if he be in sins they shall be forgiven him."

As a step toward eliminating this frequent misunderstanding the II Vatican Council has changed the name of this Sacrament to the Sacrament of the Annointing of the Sick.

I suppose there are times when a priest feels like he could have made a pretty good living in place of Boris Karloff. This is when he is called and some solicitous person wants to caution him so he won't make any mistakes in dealing with the patient. "Father, we hesitated in calling you because Mr. Brown is very, very sick, and we were afraid he might get alarmed when he saw you coming in". So the priest walks in and he sees Mr. Brown in an oxygen tent, levine tube, bottles hanging up for intravenous feeding or maybe blood transfusion, catheter going

off in the plastic bag, maybe even a cutdown on the ankle and so forth. And the priest thinks, "and *I'm* liable to scare him to death."

It is the experience of every priest to have doctors say to him, as though this is quite a reason for surprise all around, "You know so and so that you took care of the other night is going to go home in a week. She is doing very well now". Actually we are inclined to say, "Well, that is what I expected", because, when we give the anointings to a person who is seriously sick, the prayers we say are prayers asking God to grant recovery to the person and restoration to his duties in life. Thus any priest will tell you of the wonderful recoveries in his experience.

The Catholic is uneasy if he is sick and he hasn't seen the priest. From the priest he expects spiritual help, consolation and comfort. It is a pity for anyone to deprive him of this because of a personal opinion or a lack of understanding of what is involved. He can be helped most if the priest is able to come to him while he is conscious. To wait until the person is unconscious before calling a priest for the Catholic patient is to make very difficult if not impossible communication between the clergyman, the patient and his God.

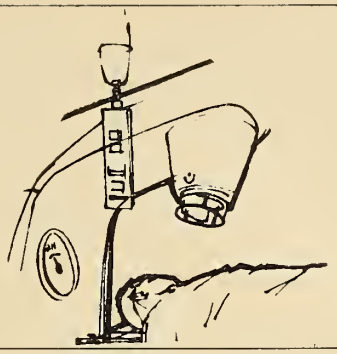
I don't think we can stress too much the assistance the clergyman can give the medical team when his aid is enlisted and he works with the team. Years ago I had a good taste of this in working with the whole group on the Polio Foundation floor at the University of Illinois Hospital. But I would like to mention one specific instance of very satisfying cooperative effort, in the University of Illinois Hospital. It was typical of many instances of fine relations in working for the patients between myself and Dr. Stuart Roberts.

He was faced one night with the necessity of serious abdominal surgery on a man who just a few days before had surgery for a laryngectomy and radical neck dissection. Doctor Roberts called me because this man was a Catholic and asked me to see him as the patient was very apprehensive. Doctor Roberts briefed me completely on what was involved. I had established a friendly relationship with the patient through seeing him before surgery, also giving him the Sacrament of the anointings after surgery when he was in critical condition. Now I was able to calm him and I stayed with him right into surgery. Through all the excellent care he received he recovered.

But to accomplish these things, the cooperation must be planned; it can't be left to a chance meeting in the corridor. There are instances when this communication *should* take place, at least in fairness to the chaplain, as well as for the mutual good results in patient care. One instance I would cite would be that of cardiac surgery. When this procedure, known as "open heart surgery" was in the process of development, it was a trying time for all involved. You could hear statements like, "Well, when they were doing it at such and such a place they lost fourteen out of the first fifteen" and so on. Or, after the cases, "Well, they were bad risks anyway". In the meantime the clergyman was visiting the patients and trying to help them—to what? It would seem that this would be a time when the clergyman could not be left out of the team approach—he was to have a great deal to do with a healthy mental preparation for surgery. And he did have his own conscience to live with—after all, these patients were looking to him as their spiritual father, their guide and their counsellor. And it wasn't unusual that he had to face the family and relatives afterwards.

There is much that can be accomplished by the health team in total patient care and it is in these conferences that we find the many ways of cooperation.

MEDICAL PROGRESS



HARVEY KRAVITZ M.D./editor

CURRENT DEVELOPMENTS IN REGIONAL ENTERITIS

A SURVEY OF RECENT LITERATURE

PART 2

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and
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/chicago

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Concluded in this issue.

Course and Complications

The relationship between acute regional enteritis, often present in children,[44] and chronic regional enteritis remains ill-defined.[45] Presumably chronic regional enteritis begins as an acute process; although the probability is that, in many instances, an initially mild or smouldering tissue reaction progresses to chronicity without overt transition through an acute stage. According to some observers, one-fourth of patients with acute regional enteritis may progress to chronic enteritis, while the others may have no further symptoms.[46,47] However, in delineating the natural history of the disease, careful prolonged observation of patients is necessary, in view of the frequency of recurrences after surgical resection, and the recurrences that may develop after long periods of quiescence.

Regional enteritis may be associated with numerous intestinal and rectal complications, including partial to complete obstruction of small intestine, fistulae between loops of small intestine and bowel, skin, bladder and vagina, perianal abscesses and fistulae. Intra-abdominal abscesses, resulting from extension of the deep intestinal ulcerations through the serosa, are not uncommon and may involve the presacral space[48] or present in the region of the thigh by extension along tissue planes.[49] Perforation of the small intestine in regional enteritis necessitates consideration of this problem in the differ-

ential diagnosis of the acute abdomen.[50-52] Bright red rectal bleeding or melena may occur as the result of penetration of the ulceration, inflammatory process into larger blood vessels.[53,54] In addition to enterovesical fistulae, urinary difficulties include an increased incidence of nephrolithiasis[55] and, less often, urinary obstruction, by involvement of the ureter in the inflamed small bowel and mesentery.[56] Hepatic complications include multiple liver abscesses secondary to suppurative pylephlebitis,[57] and biliary cirrhosis.[58] Adenocarcinoma of the small bowel in association with regional enteritis is being reported more frequently.[59-63]

Systemic complications are less common than in ulcerative colitis, but they include nutritional deficiencies, malabsorption and retardation of growth, pyoderma gangrenosum, arthritis,[64,65] rheumatoid spondylitis,[66,68] erythema nodosum[69] and clubbing of the fingers. The incidence of rheumatoid spondylitis apparently is twenty times higher in inflammatory small bowel disease than in the general population.[66] Chronic regional enteritis also may be complicated by secondary amyloidosis, and, ultimately, by death from renal failure as the result of involvement of the kidneys.[70]

Medical Treatment

The medical treatment of regional enteritis has not changed substantially in recent years. Therapy remains supportive, symptomatic, comprehensive, and must be sustained. The program includes restoration of nutrition, a bland diet, antispasmodics and antimotility agents. Sulfonamides, both absorbable and non-absorbable, are prescribed and appear to be helpful, at least occasionally; although their effects upon the bacterial flora of the gut during prolonged treatment are not known. The absorbable sulfonamides may be helpful as adjuncts to the treatment of perirectal abscesses or fistulae, but heat locally and surgical drainage or excision usually are necessary. X-ray irradiation of the abdomen, through portals overlying the diseased intestine, has not received general acceptance.

Although initially disappointing, perhaps because of their use in patients with irreversible cicatrization of small intestine, corticotrophin (ACTH) and corticosteroids have proven to be useful therapeutic adjuncts, in at least some patients with active regional enteritis, extensive involvement of small bowel, in regional enteritis associated with malabsorption and malnutrition; and in patients with ileocolitis. However, the long-term effects of corticosteroid therapy in chronic regional enteritis have not been evaluated fully. In the absence of obvious surgical indications, most patients with regional enteritis continue to be treated medically.[71,72,73] The presence of a palpable mass in the right lower abdominal quadrant, or bleeding, often cited as absolute requirements for surgery, may be only relative indication, as the mass may disappear on prolonged medical management, and bleeding may recur despite multiple resections of small intestine.

Surgical Management

The number of patients with regional enteritis treated surgically approximates 50 per cent; though in some centers, up to 88 per cent of patients with regional enteritis are treated surgically.[74] However, the recurrence rate continues to be very high, averaging about 2 in every 3 patients;[75,76] and medical treatment must be resumed in all patients after surgery.[77-80] The pronounced tendency to recurrences after resection of diseased bowel is a challenging unexplained problem. Renewal of the process despite removal of all diseased bowel, as determined by histological examination, clearly indicates that the etiologic factors have not been extirpated. Another possibility is that the fullest extent of the disease cannot be visualized at the time of operation by current methods. Occasionally, operation has been deferred for extended periods, in anticipation of subsidence of the acute inflammation. Massive resection of small intestine may be helpful in controlling the disease in selected cases,[81,82] although the hazard of significant impairment of nutritional status is ever present. The use of corticosteroids "prophylactically" immediately after surgery, in conjunction with "standard" management, to prevent recurrences, is under investigation and no definite information is available now.

The indications for surgery in regional enteritis include obstruction, perforation, intra-ab-

dominal abscesses and fistulae, uncontrollable hemorrhage, entero-cutaneous fistulae and uncontrollability of the disease by medical management.[83] Relative indications for operation must include: considerations of the age of the patient, since recurrences are far more frequent when the onset of illness occurs under the age of 30;[75] the extent of involvement of the bowel, since extensive enteritis often is not amenable to operation; the location of the disease, since the operative results may be poorer in ileocolitis than in regional enteritis; and, finally, a history of earlier operations, since prior removal of substantial segments of small bowel may obviate resection of more intestine, despite recurrent disease. The mortality rate of operation is relatively low, approximately 2-3 per cent.

Prognosis

In most patients with regional enteritis, the course of the disease is relativtly benign, despite periodic exacerbations and remissions. A careful study of the mortality of regional enteritis placed the death rate in this country at 0.08 per 100,000 population, much lower than that of ulcerative colitis.[84] Two important factors are the age of the patients at the onset of symptoms, the disease tending to be more severe in younger individuals, and the location of the inflammation, since the commonest site, terminal ileum, is often being associated with less severe disease than in jejunoileitis or ileocolitis. The anatomic extent of the disease may be relatively stationary in individual paticnts but, in other instances, progression of the inflammation eventually may include the entire colon.[85]

Regional enteritis during pregnancy usually does not pose a serious threat to the mother or the child, unless the disease occurs acutely for the first time during pregnancy, when it often is severe and is associated with spontaneous abortion or premature labor.[86]

Granulomatous Jejunoileitis

Granulomatous inflammation of both the jejunum and ileum tends to be diffuse; obstruction and fistulae are uncommon.[87] The histologic features are the same as in ordinary regional enteritis. The treatment is largely medical. Resection of all diseased intestine is hazardous because of the extensive involvement, and the operative results, furthermore, have been disappointing because of the pronounced tendency to recurrences. Granulomatous duodenitis has been reported in more than 25 cases,[88,89] often presenting as intestinal obstruction, and requiring a bypass operation to relieve the mechanical problem.

Granulomatous Ileocolitis

The differentiation of "typical" ulcerative colitis from other inflammatory disease of the colon such as "right-sided colitis" is being studied and no definitive evaluation of this problem can be made at present. Involvement of the ileum and colon by inflammatory disease also may be confused by two differing concepts: one, that ulcerative colitis and regional enteritis co-exist in the same patient;[19,20] and the other, emphasizing the granulomatous inflammatory involvement in both areas.[20-23,90] When indicated, the simplest surgical course is preferable. Multiple operations are to be avoided, if at all possible, since, despite extensive removal of small intestine, they do not necessarily provide permanent control of the disease.

Granulomatous ileocolitis or granulomatous colitis histologically resembles regional enteritis. The features include thickening of all layers of the colonic wall by edema and fibrosis, granulomas, lymphoid hyperplasia, longitudinal ulceration, enlargement of regional lymph nodes, and, ultimately, shortening of the colon. Although reported in the older age groups, many instances of the disease are being observed among teenagers. The course is more severe, with fewer remissions, and an increased incidence of perirectal fistulae, and perianal infection.[91] Proctoscopic examination often is normal, but biopsy of areas of erythema, granularity and friability may reveal granulomas. Recurrence after surgery for granulomatous ileocolitis appears to be even more prompt than after operations for "ordinary" regional enteritis.

Summary

The etiology of regional enteritis remains unknown, but genetic, viral, immunologic and "toxic" agents in the intestinal content are re-

ceiving consideration. The earliest pathologic abnormalities include submucosal edema and lymphangiectasia and these changes are implicated in the development of the characteristic tissue reaction of regional enteritis. Inflammation of the lymphatics appears to be a significant component of the disease process.

Though cramping abdominal pain, fever, diarrhea, weight loss and anemia in a young person are strongly suggestive of regional enteritis, the diagnosis may be obscure initially, presenting as unexplained fever or retardation of growth, at times, ascribed to an endocrinological disorder. The course of regional enteritis is characterized by many complications, especially involving the small bowel, and perirectal region. Systemic complications are not uncommon, but are less frequent than in ulcerative colitis.

The management of regional enteritis remains largely medical, even in patients requiring surgery for complications. No important advances in therapy have emerged in recent years. Adrenal corticosteroids and corticotrophin have been useful adjuncts in treatment, but their ultimate value in this disease is not clear. Surgical intervention is required frequently for management of the complications, but its usefulness is limited by the frequent recurrences, and, at times, by relentless progression of the disease. However, in many instances, despite exacerbations and remissions, the course of the disease appears relatively mild or controllable and though "spontaneous" cures are infrequent, they have been observed. An important recent concept is the realization that any portion of the gastrointestinal tract is vulnerable to regional enteritis.

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DISASTER MEDICAL CARE COMMITTEE REPORT

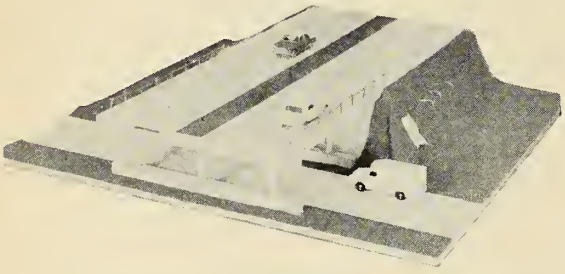


FIGURE 1
View of a model of a superhighway elevated to cross over a street.



FIGURE 2
View of elevation of superhighway with entrance to shelter area.

PRACTICAL APPROACH TO SHELTER FROM IONIZING RADIATION

WITH A SPECIAL REFERENCE TO STORAGE ESTABLISHMENT AND MAINTENANCE OF EMERGENCY HOSPITALS

Max Klinghoffer, M.D./elmhurst

Chairman, Disaster Medical Care Committee, Illinois State Medical Society.

THE PROBLEM OF RADIATION fallout shelters has been with us since 1945 when the first atomic weapon was exploded. Progress in developing existing structures which have a potential high radiation protection factor has not kept pace with the progress of development of atomic weapons.

The nuclear weapon bears some resemblance to conventional weapons. Both release heat and blast, although, of course, the magnitude is much greater in nuclear weapons. The nuclear bomb also releases a third form of energy —ionizing radiation.

Should nuclear war come to this country, there is little doubt that many of our people would survive blast and heat. But for those survivors, and hence for the future of this country, protection against radiation means the difference between life and death.

There are three major factors which can protect us against radiation: time; distance; and shielding. The factor of time is involved insofar as radioactive isotopes "decay" at a given rate and ultimately reach a point where the intensity of radiation may be negligible. But those people exposed to these radioactive particles cannot wait for "decay" with time.



FIGURE 3
Removing top of model (superhighway) to reveal shelter under roadway.

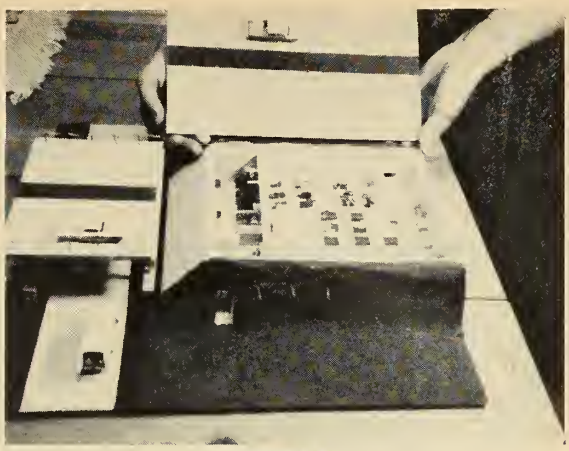


FIGURE 4
View of emergency hospital, and quarters for personnel, in shelter area under roadway.

They may be exposed to lethal doses of radiation before the "decay" has reached a low level.

Distance is important from the standpoint of safety since intensity of ionizing radiation, like that of visible light, decreases inversely as the square of the distance. But again, with the many factors which influence fallout, no one can be sure that he is far enough away from the source to be "safe".

This leaves shielding as the only practical means of protection against ionizing radiation. Shielding refers to the interposition of some material or materials of great density between the source of radiation and the human body. Lead, for example, is a good shielding material, and is commonly used to protect personnel working about X-ray devices. But lead is not a practical means of shielding for the average citizen. The average citizen must rely on common materials, such as earth, brick, and concrete, all of which have a good shielding factor.

For years, those involved in the problem have advocated fallout shelters—both public and private. The private shelter usually is depicted as a concrete block structure, often within an existing basement, and with a high shielding factor. These are practical, and construction should be encouraged. But the private shelter does not solve all of the problems, because of the many people who may be away from home at the critical time. For this, public

FIGURE 5
Cutaway view from above showing emergency hospital under superhighway. Actual size would be 60′ wide by 300′ long, allowing area of 18,000 sq. ft. for establishment of emergency hospital.



shelters, especially constructed, are essential if they are to survive.

Public shelters are a "must" for storage and establishment of emergency hospitals.

Accurate statistics are not available regarding the number of private shelters in this country. The only public shelters available are those which can be found in structures now in existence. Most of these would require substantial modification and adaptation to be truly adequate as fallout shelters. So far as new construction is concerned, little has been done to build in protection factors in these buildings. Reasons for failure to do so are both psychological and financial.

While the Federal Government has established a shelter program as a necessary factor for a sound system of defense in nuclear war this concept has not been pursued with great vigor. No more than "lip service" has been given to construction of public fallout shelters as such. In order for a fallout shelter program to succeed, the problem must receive serious consideration by the heads of government especially at high levels, and it must be supported by positive action as well as paper planning. Only if the government at high levels will actively support such a program will we see any effort at the local levels. Once the Federal Government has taken positive action in this direction such information should be disseminated through every known media in order to educate the American public.

But so long as legislators at a high level of government talk of shelters, with tongue in cheek, it is unlikely that the average citizen will do anything to protect himself or his family.

There is also a factor of cost, although the home fallout shelter may cost less than a new television set. And the cost may be further decreased by use of the shelter as a "dual purpose" room. Nevertheless, cost remains a major factor.

Still another problem, and this is a great one, is the one of drainage. The easiest way to construct a fallout shelter is below ground, so that the earth serves as a shield, and only an overhead protection is needed to complete the structure. But in many areas today—such as metropolitan areas and in our low level locations, "underground" is impractical because of flooding. In many cities, areas below grade become flooded after heavy rains, when storm sewers are overburdened. In low level areas, such as Florida and Louisiana, ground water may be a problem at all times.

Consideration of these problems in construction of both public and private shelters leads to a more practical solution which could provide shelter for a fair proportion of the surviving population and also storage areas and service areas for the emergency hospitals stored throughout the United States today.

For many years we have been constructing major highways and superhighways throughout the United States. These are located in such a manner that they are likely to be accessible to most of the surviving population after a nuclear attack. These highways offer the potential of massive shelter structure which would be "below ground", but "above earth". By relatively little modification of present construction, each highway built above grade could become a shelter for personnel, material, and hospitals. Further, they could be utilized as "dual purpose" structures, such as depots of supply, post offices, and various other governmental offices. A schematic diagram of such a structure is shown in the accompanying drawings.

The age of nuclear energy has been with us for twenty years and the danger of nuclear war for an equal length of time. Nor is it likely that such danger will disappear in the forseeable future. To construct buildings today without shelter area is approximately the equivalent of constructing buildings without fire escapes.

The construction of shelters for personnel and for medical facilities underneath highways may well be the practical supplement to any existing shelter program. It seems certain that such a plan would be a method of saving the lives of many of our citizens who would otherwise have no chance following a nuclear attack. This would also serve to house and to establish the two thousand emergency hospitals now stored throughout the United States. Since each of these CDEH units can be expanded in time of disaster to approximately eight hundred beds, such a shelter system, in conjunction with these existing hospitals, would provide approximately one and one-half million hospital beds post attack.

The View Box

Leon Love, M.D.
Director, Diagnostic Radiology
Cook County Hospital

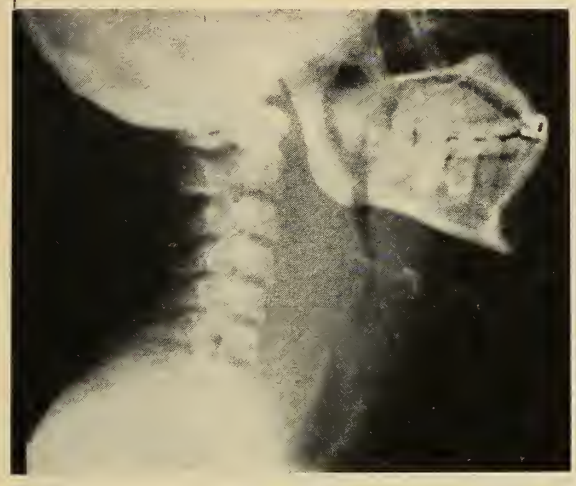


Figure 1

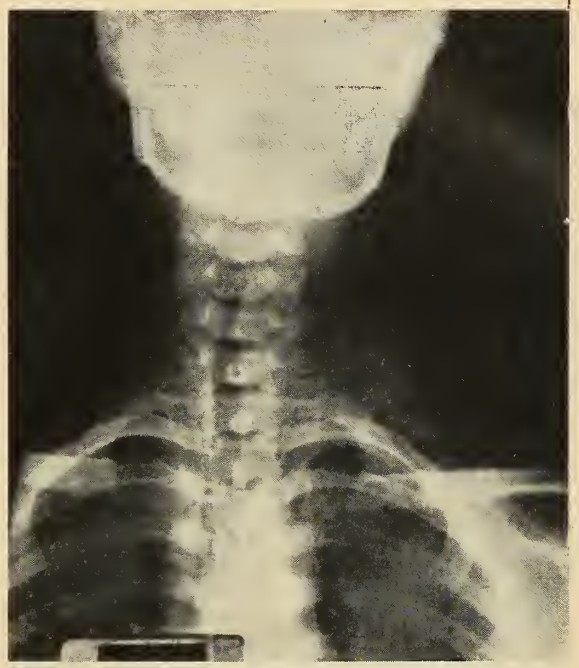


Figure 2

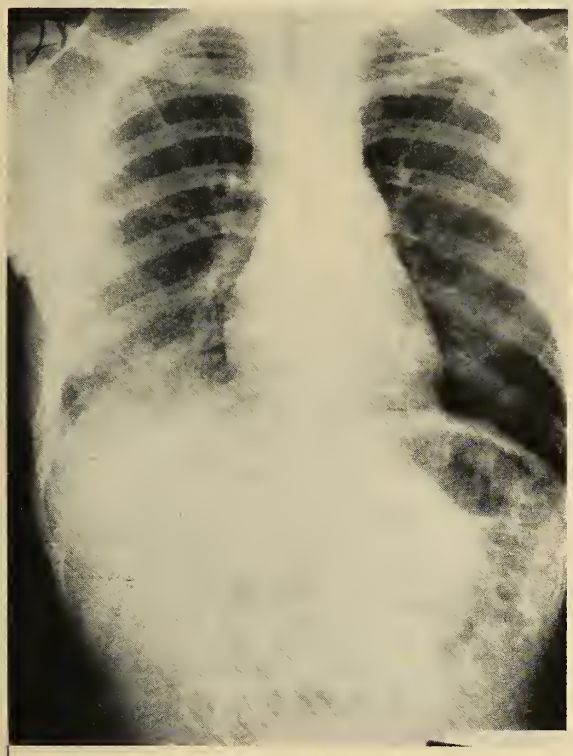


Figure 3

This 24-year-old male entered the hospital with acute dyspnea and a fever of one day's duration. He stated that his dyspnea occurred after a bout of hard coughing.

Physical examination revealed an extremely pale and acutely ill patient, with marked inspiratory stridor. Dullness was noted at the right base. His right knee was deformed and swollen, with limited mobility. There was marked swelling of the heels.

The laboratory work-up revealed red blood cells 2.5 million and hemoglobin 25%.

What is your diagnosis?
1) Tuberculosis
2) Hodgkins Disease
3) Hemophilia
4) Sickle Cell Anemia

(Answer on next page)

The View Box

—diagnosis and discussion *(Continued from preceding page)*

Diagnosis: Hemophilia



Figure 4

The patient was from a known hemophiliac family.

The marked displacement and narrowing of the trachea and hypopharynx anteriorly and laterally resulted from a huge hematoma which extended downward into the mediastinum and accounts for the right paratracheal density as well.

The original illness was a pneumonitis in the R.L.L. which caused his coughing spell. The hemorrhage resulted from the trauma associated with his severe cough.



Figure 5

The changes about the knee joint are characteristic of the disease, with erosion and cyst formation as the usual findings. The erosions occur juxta-articular and may be marked with shrinkage of the articular cartilages. The natural depression in the joint, such at the intercondylar notch in the knee, becomes wider.

Cyst formations vary in size and are usually situated in the epiphyseal area. Complete destruction of bone may occur and mimic an osteolytic sarcoma. The joints become contracted and flexed with soft tissue swelling, which appears slightly dense due to the presence of hemosiderin in the tissues.

1. Stiris, Gabriel: Bone and Joint Changes in Haemophiliacs. Acta Radiologica 49:269-276, April 1958.

SMOKING HABITS AND DISEASE IN ILLINOIS

E. Cuyler Hammond, Sc.D., and Evelyn C. Street, R.N., M.A./chicago

A HIGH DEGREE of relationship between cigarette smoking and death rates of men has been found in six previous prospective studies carried out in this country, Great Britain, and Canada.[1-6] In this paper, we will present findings on this subject in the first 34.5 months of follow-up in the Illinois segment of a large prospective epidemiological study which was started in 1959 and is still in progress.[7-10]

During the latter part of 1959 and early 1960, volunteer workers of the Illinois Division of the American Cancer Society enrolled 80,651 men and women, the mean date of enrollment being November 16, 1959. The study area encompasses all 102 counties of Illinois. Upon enrollment, each subject answered a detailed questionnaire covering many factors including past and present smoking habits. The subjects are traced once a year and are requested to fill out brief questionnaires once every two years. In the most recent completed follow-up, 99.8% of the subjects were traced through September 30, 1962. (The next follow-up was started on October 1, 1963 and is still in progress.) When a death is reported, we request the Illinois Health Department to supply us with a copy of the death certificate; and when cancer is mentioned on a death certificate we request the doctor to supply additional information.

This report is confined to the records of 32,602 men between the ages of 40 and 89 who were traced through September 30, 1962. Of these 32,602 men, 1,490 (4.6%) were reported to have died; and we now have copies of the death certificate on 1,487 of them. Cancer was mentioned on 282 of the certificates and doctors have provided additional information on 91.5% of them.

From the Illinois Division of the American Cancer Society and the Statistical Research Section of the Medical Affairs Department of the American Cancer Society, Inc.

Physical Complaints

A list of various physical complaints was printed on the first questionnaire and the subject was asked to check "yes" or "no" after each of them to indicate whether or not he had the complaint "at present." Those who had a complaint were asked whether it was "slight," "moderate" or severe." Of the 32,602 men between the ages of 40 and 89, 9,770 said that

TABLE 1

PHYSICAL COMPLAINTS REPORTED BY 9,770 MEN WHO SMOKED 20 OR MORE CIGARETTES PER DAY AND BY 7,405 MEN WHO NEVER SMOKED REGULARLY. AGE GROUP 40-89.

Physical Complaint	Cigarette smokers with complaint No. of Men (a)	% (b)	Non-Smokers with complaint % (c)	Ratio (b)÷(c) (d)
Cough (slight, moderate, severe)	5,626	57.6	15.3	3.76
Cough (moderate or severe)	2,652	27.1	4.7	5.77
Shortness of breath (slight, moderate or severe)	3,407	34.9	15.3	2.28
Shortness of breath (moderate or severe)	1,278	13.1	5.1	2.57
Pain or discomfort in chest (slight, moderate or severe)	1,610	16.5	10.5	1.57
Pain or discomfort in chest (moderate or severe)	522	5.3	3.2	1.66
Loss of appetite	659	6.7	2.0	3.35
Loss of weight	769	7.9	5.9	1.34
Gain of weight	492	5.0	3.7	1.35
Hoarseness	1,149	11.8	9.0	1.31
Nausea or vomiting	542	5.5	3.7	1.49
Indigestion	2,577	26.4	20.9	1.26
Pain in Stomach	1,416	14.5	10.3	1.41
Diarrhea	648	6.6	5.0	1.32
Fatigue easily	3,826	39.2	27.0	1.45

they were currently smoking 20 or more cigarettes a day and 7,405 said that they had never smoked regularly. Table 1 shows the number and percent of these smokers who reported having various complaints and the percent of non-smokers who reported having the complaints. The percentages for the non-smokers had been adjusted to the age distribution of the cigarette smokers (this being necessary for comparability since the non-smokers tended to be older than the cigarette smokers).

Cough, shortness of breath and pain or discomfort in chest were all reported far more frequently by the cigarette smokers than by the non-smokers, the ratio being 3.78 to 1 for cough, 2.29 to 1 for shortness of breath and 1.57 to 1 for pain or discomfort in chest Considering only subjects who reported these complaints to a moderate or severe degree, the ratios were 5.78 to 1 for cought, 2.56 to 1 for shortness of breath and 1.66 to 1 for pain or discomfort in chest. These findings are consistent with findings in histologic studies of changes in lung tissue in relation to cigarette smoking.[11-12] Such studies have shown a high degree of association between cigarette smoking and: 1) hyperplasia and the occurrence of cells with atypical nuclei in bronchial epithelium 2) hyperactive glands in the wall of bronchial tubes and 3) changes in the lung parenchyma including rupturing of alveolar septums, fibrosis and thickening of the walls of arterioles and small arteries.

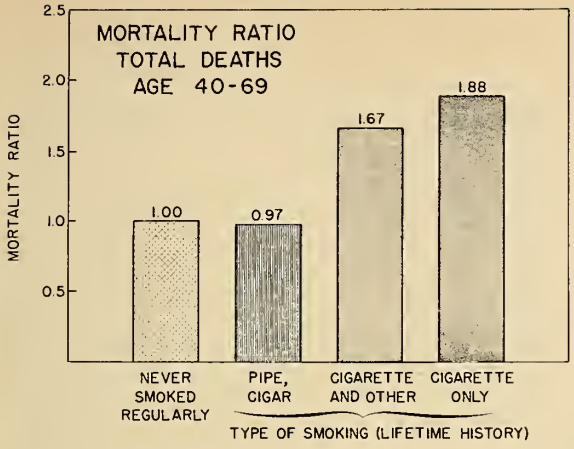
Loss of appetite was reported over three times as frequently by cigarette smokers as by non-smokers. One might expect this to be associated with loss of weight; and loss of weight during the preceding two years was reported somewhat more frequently by cigarette smokers than by non-smokers. However, gain of weight was also reported somewhat more frequently by cigarette smokers than by non-smokers. This suggests that fluctuations in weight may occur somewhat more frequently in cigarette smokers than in non-smokers.

A number of other physical complaints such as hoarseness, nausea or vomiting, pain in stomach, indigestion, diarrhea and a tendency to "fatigue easily" were also reported somewhat more frequently by cigarette smokers than by non-smokers The picture in general indicates that cigarette smokers, as a group, tend to feel less physically fit than do non-smokers.

Mortality

Table 2 shows the men classified by type of smoking (lifetime history). The figures under the heading "observed" are the actual number of deaths reported from the start of the study through September 30, 1962. Figures under the heading "expected" are the number of deaths which would have occurred if the age-specific death rates in each group had been the same as the age-specific death rates of men who never smoked regularly. In other words, the

FIGURE 1.



age-specific death rate of the non-smokers is taken as a standard for comparison. The mortality ratio is the observed number of deaths divided by the expected number of deaths. By definition, the mortality ratio of the non-smokers is 1.00.

Men with a history of only cigarette smoking had by far the highest death rates (as indicated by their high mortality ratios). In age group 40 to 69, the death rate of such cigarette smokers was 88% higher than the death rate of non-smokers; and in age group 70-89 the death rate of such cigarette smokers was 33% higher than the death rate of non-smokers. (See Fig. 1).

The death rate of men who smoked cigarettes and also smoked pipes or cigars (i.e. the "cigarette and other" group) was somewhat lower than the death rate of men who smoked cigarettes only. This is accounted for by the fact that men with mixed smoking habits tend to inhale the smoke less deeply than do men who smoked only cigarettes.

The death rate of pipe and cigar smokers was slightly lower than the death rate of non-smokers. This slight difference was probably due to sampling variation since as in most studies the death rate of pipe and cigar smokers has been found to be just a little higher than the death rate of non-smokers.

Table 3 shows further details on current cigarette smokers (i.e. men who were smoking cigarettes regularly at the time they enrolled in the study) with a history of only cigarette smoking. It is confined to men between the ages of 40 and 69 for the reason that there were relatively few such cigarette smokers among men in the older age groups. Some of the figures are rather unstable statistically due to small numbers. Figures for non-smokers are included to give a basis for comparison.

The mortality ratio increased substantially with the number of cigarettes smoked per day and was substantially higher among cigarette smokers who said that they inhaled the smoke deeply than among those who said that they did not inhale the smoke. The cigarette smokers who took up the habit before they reached their 20th birthday had higher death rates than did cigarette smokers who started the habit later in life.

Death certificates indicated that coronary artery disease accounted for 485 (32.6%) of the 1,490 deaths. Deaths from this cause were highly associated with the smoking habits of men in age group 40 to 69 but less highly associated with the smoking habits of men in age group 70 to 89. In age group 40-69, the coronary artery disease mortality ratios were: 1.54 for men who smoked cigarettes and also smoked pipes or cigars and 1.80 for men who smoked only cigarettes. The corresponding

TABLE 2

MORTALITY BY TYPE OF SMOKING (LIFETIME HISTORY)

Type of Smoking (Lifetime History)	Age 40-69 No. of Men	Age 40-69 No. of Deaths Obs.	Age 40-69 No. of Deaths Exp.	Age 40-69 Mortality Ratio	Age 70-89 No. of Men	Age 70-89 No. of Deaths Obs.	Age 70-89 No. of Deaths Exp.	Age 70-89 Mortality Ratio
Never Smoked Regularly	6,613	161	161.0	1.00	945	159	159.0	1.00
Pipe, Cigar Only	3,101	86	88.5	0.97	782	120	132.7	0.90
Cigarette and Other	6,540	262	156.6	1.67	528	90	72.1	1.25
Cigarette Only	13,594	520	276.6	1.88	499	92	69.2	1.33
Total	29,848	1,029	682.7	1.51	2,754	461	433.0	1.06

TABLE 3

Mortality by Amount of Cigarette Smoking, Degree of Inhalation and Age Began Cigarette Smoking. Age Group 40 to 69.

Current Cigarette Smoking	No. of Men	No. of Deaths Obs.	Exp.	Mortality Ratio
Cigarettes per day:				
1- 9	828	29	19.2	1.51
10-19	1,818	76	38.8	1.96
20-39	6,025	220	112.2	1.96
40+	1,337	60	22.2	2.70
Degree of Inhalation:				
None	632	29	16.6	1.75
Slight	1,326	61	30.0	2.03
Moderate	5,679	200	105.4	1.90
Deep	2,358	94	40.4	2.33
Age Began Cigarette Smoking:				
25+	913	33	21.3	1.55
20-24	2,533	79	48.3	1.64
15-19	5,200	218	95.5	2.28
<15	1,057	44	20.5	2.15
Never Smoked Regularly	6,613	161	161.0	1.00

mortality ratios for men in age group 70-89 were 1.43 and 1.56 respectively. Among cigarette smokers, the death rate from coronary artery diseases was related to the degree of inhalation as well as number of cigarettes smoked per day and age at start of smoking. For example, among cigarette smokers in age group 40-69, the mortality ratio was 1.57 for those who said that they did not inhale the smoke and 2.54 for this who said that they inhaled deeply; and the mortality ratio was 1.12 for men who smoked 1 to 9 cigarettes a day and 2.38 for men who smoked 40 or more cigarettes a day.

Lung cancer accounted for 78 deaths (68 in group 40-69 and 10 in age group 70-89). One of these 78 men said that he had never smoked regularly and four said that they smoked pipes or cigars. All of the remaining 73 men who died of lung cancer had a history of cigarette smoking.

Previous studies have shown a relationship between smoking habits and the occurrence of cancer of the buccal cavity, pharynx, larynx, esophagus and bladder. Of 30 men who died of cancer of these sites, 1 said that he never smoked regularly, 8 were pipe and cigar smokers (who never smoked cigarettes), 7 smoked cigarettes and also smoked pipes or cigars and 14 smoked only cigarettes.

Fifteen men died of emphysema and all of them were smokers (1 smoked only pipes or cigars and 14 had a history of cigarette smoking).

Hospitalization

At the time of the second follow-up (approximately two years after the start of the study) surviving subjects were requested to fill out a second questionnaire. On this questionnaire, they were asked whether or not they had been hospitalized since October 1, 1959 (the date the study was started). Of course, non-survivors did not fill out these questionnaires; but we assumed that all those who died had been hospitalized prior to death, this being true in the great majority of cases.

In table 4, men aged 40 to 69 are classified in groups by their smoking habits as reported on the first questionnaire; and the percent hospitalized is shown for each of these groups. For comparability, the percentage have been standardized for age on the basis of the age distribution of all the men in the study.

The general picture is much the same as that previously shown for total mortality. Only 14.0% of the men who never smoked were hospitalized within two years while 18.6% of the men with a history of only cigarette smoking were hospitalized during the same period of time. Among current cigarette smokers, the risk of hospitalization increased with amount of smoking from 13.9% for those who smoked 1 to 9 cigarettes per day to 21.6% for those who smoked 40 or more cigarettes per day. The percent of men hospitalized was greater among cigarette smokers who said that they inhaled deeply than among those who said that they did not inhale; and was greater among men who started to smoke cigarettes early in life than among those who started to smoke later in life.

Summary and Discussion

In this paper, we have reported on the smoking habits in relation to the physical complaints of 32,602 Illinois men aged 40 to 89; and have

TABLE 4

PERCENT OF MEN HOSPITALIZED BETWEEN START OF STUDY AND SECOND FOLLOW-UP (APPROXIMATELY 2 YEARS). MEN AGED 40-69 AT START OF STUDY. PERCENTAGES ARE STANDARDIZED FOR AGE ON THE TOTAL POPULATION OF ENROLLEES IN THE STATE.

Smoking Habits	Percent Hospitalized
Never Smoked Regularly	14.0
Cigar, Pipe	14.0
Cigarette and Other	17.7
Cigarette Only	18.6
Current Cigarette*	18.9
1- 9 a day	13.9
10-19 a day	18.3
20-39 a day	19.3
40+ a day	21.6
Do Not Inhale	16.1
Inhale Slightly	15.7
Inhale Moderately	19.1
Inhale Deeply	21.2
Age Began Smoking:	
25 or older	17.1
20-24	18.8
15-19	19.2
Before age 15	19.7

*Men with a history of only cigarette smoking who were currently smoking cigarettes at the time of enrollment.

reported the mortality and hospitalization experience of this group of men during the first 34.5 months after they were enrolled as subjects in a prospective epidemiological study. The findings are in good agreement with findings previously reported from other epidemiological studies on this subject.

Cigarette smokers report physical complaints (particularly cough, shortness of breath and loss of appetite) more frequently than non-smokers, are hospitalized more frequently than non-smokers, and have far higher death rates than non-smokers. Among cigarette smokers, the frequency of physical complaints, the frequency of hispitalization and the death rate increase with amount of cigarette smoking, increase with degree of inhalation of the smoke and are higher among cigarette smokers who started to smoke early in life than among those who started to smoke late in life.

As in past studies, death rates from lung cancer, cancer of certain other sites, emphysema and coronary disease were found to be higher in cigarette smokers than in non-smokers.

There is no need for us to review the literature and discuss other evidence on the subject of smoking and health since this has been done many times before. We conclude that cigarette smoking constitutes a major health hazard in Illinois as well as in other parts of the world.

Acknowledgements

We would like to thank the 32,602 men who volunteered as subjects for this study; the volunteer workers of the Illinois Division of the American Cancer Society who enrolled and traced the subjects; the Illinois Department of Health that provided us with copies of death certificates; and the many physicians who provided us with additional medical information on subjects who died of cancer.

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THE NEW HEKTOEN INSTITUTE



The new Hektoen Institute of the Cook County Hospital research laboratory center. The building to the right is the old Durand Hospital building, which was the original home of Hektoen. The two top stories were constructed several years ago. The building is still being used by Hektoen for specific research projects. It is connected to the new structure by a sixth floor walkway and an underground tunnel, which also connects to the other County Hospital buildings.



The small amphitheatre is part of Hektoen's pathology department and is used for teaching and demonstration purposes.

Dedication ceremonies were held at the new home of Hektoen Institute for Medical Research of the Cook County Hospital at 2:30 p.m., Wednesday, November 11, as part of a week long observance marking the opening of the 6.4 million dollar research center.

Participants in the dedication ceremony included Richard J. Daley, Mayor of Chicago; Seymour Simon, president of the Board of the Cook County Commissioners; Charles S. Bonk, Cook County Commissioner; Dr. Karl A. Meyer, chairman of the board of trustees of Hektoen; Fred A. Hertwig, superintendent of Cook County Hospital; and Dr. Sam Hoffman, Director of Hektoen.

Highlight of the week was a Scientific Day Program on Thursday, November 12. Distinguished scientists in Chicago to participate in the all-day session included Dr. Selman A. Waksman, 1952 Nobel prize recipient in medicine.

Dr. Waksman addressed the 9 a.m. session of the academic program on "Antibiotics Today." The Russian-born microbiologist won the Nobel prize for his work in the discovery of streptomycin.

Hektoen Institute is today recognized as one of the country's foremost centers of medical research.

Founded by a group of distinguished physicians and public-spirited citizens, Hektoen was incorporated in 1943 as a not-for-profit research



The lipid laboratory in the biochemistry department is typical of the many laboratory rooms in use by all Hektoen departments. Technicians Deane Kerr (background) and Sandra Pearson are pictured with equipment which analyzes quantitatively the type of lipid or fat.



The auditorium on the first floor seats 285 people and is completely equipped for showing movies and handling meetings and large groups for learning. It is glass-walled and sound-proof.

organization integrated with clinical practice, for public service, and maintained through private funds. It was named in honor of Ludvig Hektoen, who was then director of the John McCormick Institute and professor of pathology at Rush Medical College, and who was considered to be one of the first to devote himself prominently and persistently to pure medical science. He interned at Cook County Hospital in 1887.

Hektoen Institute originally was housed in the old McCormick Institute and Durand Hospital buildings, which had been purchased by the Board of Commissioners of Cook County so that Hektoen facilities would become an integral component of the general structure of the Cook County Hospital.

The new multi-million dollar facility, located on the site of the McCormick Institute at 629 Wood Street, was financed through a $5,100,000 bond issue approved in 1959. A federal construction grant totaling $1,338,000 made up the difference.

As a private, non-profit corporation, Hektoen Institute is wholly dependent upon contributions from individual sources. These funds make it possible to purchase modern equipment and replace old equipment. Additionally, these private funds are necessary to retain the services of outstanding scientists as well as trained technicians and research assistants, and to maintain other experimental facilities such as an extensive animal laboratory. Because housing and utilities are furnished without cost by the County, all contributions and grants to Hektoen are used solely for the direct requirements of research.

Hektoen is particularly known for its works in leukemia, tuberculosis, nephritis, heart disease, liver and gastric intestinal and surgical research. Hundreds of scientific papers have been published by Hektoen principals and associates, many of whom provide their services on a voluntary basis.

Governed by a board of trustees headed by Dr. Karl A. Meyer, who serves as chairman of the board, the Institute operates under corporate by-laws which define its broad objectives as follows:

"To organize, develop and support laboratories for research in medicine and surgery; to extend the boundaries of science, whereby measures will be found to combat disease in general and to improve the care of the sick; to utilize the clinical material in Cook County Hospital for the extension of advances in diagnosis and treatment; and to develop further the clinical laboratories and to amplify the work of the department of therapeutics in Cook County Hospital for providing better facilities for diagnosis and treatment of the sick of Cook County."

CASE REPORT

HEMATOMA OF THE RECTUS ABDOMINIS MUSCLE SIMULATING AN ACUTE ABDOMEN IN PREGNANCY

James D. Cusack, M.D., and
Frank C. Lawler, M.D., FACOG,
/chicago

Spontaneous hematoma of the rectus abdominis muscle is a rare complication of pregnancy often imitating an acute abdominal condition and always perplexing the clinician. Maternal mortality rates of 12%-15% and fetal mortality rates of up to 50% by some authors (12, 16) are convincing evidence that this syndrome is worthy of more consideration.

A review of certain aspects of this disease in 44 prior cases and a personal case history are submitted to reemphasize the diagnostic puzzle this condition may present.

Case Report

A 27 year-old, Gravida 7, Para 6, Negro female was admitted to the Labor Rooms at 32-33 weeks gestation on October 15, 1963. Her expected date of confinement was December 1, 1963. From 1951 through July, 1962, all of her deliveries were normal, full-term, and spontaneous. She had no surgical history nor significant medical disease except for "kidney infections" after her last two deliveries.

Her chief complaint was abdominal pain in the left lower quadrant which she first noted about three hours prior to admission while lying in bed. The pain was steady, moderate in intensity, and not related to position but aggravated by coughing and straining. She had had a "cold" with rather severe coughing for two days. She denied any gastro-intestinal symptoms, dysuria, hematuria, or trauma.

Physican examination: The patient was an obese Negro female weighing 217 lbs., with a weight gain during pregnancy of 27 lbs., who was in moderate distress with pertinent physical findings localized to the abdomen except for scattered rhonchi in both lung fields. Her blood pressure was 160/80, her pulse was 96 and strong, and her temperature was 98.6° F. Her uterus measured 31 cm. McDonald height and showed no evidence of contractions. Fetal heart tones were noted at 120 per minute. The fetal position was not definitely ascertained by palpation but the presenting part was not engaged. X-rays were ordered to rule out twins. A localized area of tenderness was noted in the LLQ with muscle guarding present but rebound tenderness absent. Bowel sounds were present. The cervix was thick, long, and closed. There was no vaginal bleeding and adnexal masses were not palpable. Clotting time was 5 minutes. Hematocrit was 35 vol. %. At this time the diagnostic impression was possible early abruption.

Seven hours after admission, the LLQ pain was described as persisting with some increase in intensity. The patient's vital signs were stable. Fetal heart tones were 130. X-rays revealed "Twin fetuses in early third trimester." The patient was transferred to the surgical obstetric ward for sedation and observation.

Eleven hours after admission there was marked tenderness in the LLQ with rebound tenderness and hypoactive bowel sounds present. Observers were still unable

to palpate a discrete mass with bimanual technique. Some bowel distension was noted. Her blood pressure was 130/80, her pulse, 96. A repeat hematocrit was 34 vol % and the clotting time was still 5 minutes. Fetal EKG revealed only one definite set of fetal heart tones, another set was questionably traced. At this time, different observers considered diagnoses of early abruption of one placenta, twisted ovarian cyst, incomplete rupturing uterus, and degenerating fibroid.

Seventeen hours after admittance to the hospital, the abdominal pain had increased markedly in intensity. The abdomen was tender and rigid in palpation. The supra-umbilical distension had increased during the past few hours. The point of maximum tenderness was to the left and slightly inferior to the umbilicus where a poorly defined mass approximately 10 cm. x 10 cm. could be felt. The fetal heart tones, pulse, and blood pressure remained stable with no alteration since admittance to the hospital. At this point she was taken to surgery.

Under general anesthesia, a low midline incision was made, and, as the anterior rectus sheath was opened, it was noted that large clots of blood could be expressed from beneath the left rectus sheath. The muscle itself had been almost completely disrupted transversely near its cephalic attachment. Approximately 400 cc of clots were removed. The superior epigastric artery was dangling free from the proximal mass of muscle and was ligated. Small bleeding points were ligated; gel foam was used in the area of the evacuated hematoma and hemostasis was obtained. There was no attempt made to anastamose the disrupted muscle masses. The peritoneum was opened and no evidence of intra-peritoneal pathology was found.

The patient experienced marked post-operative pain over the LLQ; however, she was well-sedated and her vital signs remained normal. Hematocrit was 33 vol %. Bleeding time was 3 minutes. Clotting time and platelet counts were normal. However, sixteen hours post-surgery, the patient went into spontaneous labor and delivered twin male infants who were in poor condition and weighed 3 pounds 2 ounces and 3 pounds 4 ounces. Both expired ten hours after birth. Autopsy finding revealed congenital pulmonary atelectasis.

Subsequently, the patient had a relatively uneventful course and she was discharged on the tenth post-operative day in good condition.

General Comment

Max Bröedel's excellent monograph[4] on the rectus abdominis muscle describes the various anatomic features that determine the site of rupture and extent of hemorrhage in relation to this muscle. The muscle, which is divided into four or five muscle bellies by transverse septa, is covered by a strong tendonous sheath except for the posterior aspect of the lower portion where only the transversalis fascia separates it from the peritoneum. Here, extravasated blood can press upon the peritoneum causing symptoms of intra-abdonimal disease. The muscle is supplied by two arteries: the inferior epigastric branch of the external iliac and the superior epigastric branch of the internal mammary. These arteries run between the muscle and the peritoneum with anastomotic vessels penetrating the muscle bellies.

TABLE 1

PRECIPITATING FACTORS IMPLICATED IN 45 CASES OF HEMATOMA OF THE RECTUS ABDOMINIS MUSCLE IN PREGNANCY

Cough	25
Active Labor	8
External Trauma	2
Influenza	1
Typhoid	1
Undetermined	8

Hematomas occurring in the upper part of the rectus are limited to the borders of the muscle sheath; but those in the lower rectus beneath the linea semi-circularis may dissect laterally between the openurosis of the transversus abdominis and the transversalis fascia and extend to the opposite side or actually rupture into the abdominal cavity.

That pregnancy predisposes the rectus muscle to injury is well substantiated by Teske's series of 100 cases of rectus muscle hematoma[13] in which 22 occurred in association with pregnancy. Overstretching of the muscle fibers in pregnancy appears to increase the susceptibility to injury. Under these conditions severe coughing, sneezing or exertion can suddenly change the length of the rectus muscle and result in rupture of the muscle or of the epigastric vessels.

A summary of 45 cases with regard to etiology is noted in Table 1. Coughing, often the severe paroxsymal type seen with acute bronchitis, was by far the most common precipitation cause for this condition in pregnancy. This is in contrast to studies not related to pregnancy in which trauma is implicated in almost 50% of the cases. Such systemic causes as influenza and typhoid fever appear to cause muscle fibers to degenerate and thereby increase its susceptibility to rupture. More recently, anti-coagulants have been involved.[10]

It appears that an incorrect diagnosis is most

often made through a failure to suspect the disease. That this condition can simulate a variety of intra-abdominal diseases is illustrated by Table 2 which lists the principle diagnoses considered in the initial treatment of this disease.

Less than 25% of these cases have been diagnosed correctly during the initial examination of the pregnant woman; nevertheless, rather constant signs and symptoms are reproduced in the case histories. It is characteristically a disease of the multiparous woman, usually over 30 years of age and in the last trimester of pregnancy. On questioning her, one frequently elicits symptoms of an acute upper respiratory condition. The onset of the illness often begins during an episode of paroxsymal coughing with abrupt abdominal pain usually localized to one quadrant of the abdomen, steady in nature and soon reaching a peak in intensity. Muscle rigidity with rebound tenderness is present in over 50% of the cases making palpation of a mass difficult. However, a mass is usually present though not always visible. If a mass is noted, the diagnosis may be aided by having the supine patient lift her head from the pillow. A mass confined to the muscle bellies produces a characteristic firmness and immobility as the abdominal musculature contracts.[5]

Although the site of the hematoma is variable, 80% occur in the lower quadrants. Vomiting is frequent and when associated with prostration usually indicates a rapidly developing hematoma. Ecchymosis and discoloration of the skin surrounding the umbilicus have been noted but this sign occurs late, often after the third day of the illness. The vital signs frequently remain stable although hypovolemic shock can occur if the blood loss is great enough. This was the most common cause of maternal mortality before blood replacement was available. A moderate leukocytosis occurs (10,000—12,000) and radiologic studies occasionally are of diagnostic value demonstrating soft tissue shadows.

In the cases reviewed, operative intervention was the method usually employed although the laporatomy was often undertaken to establish the diagnosis or when expecting other pathology. Either a low midline or paramedian incision directly over the mass can be made with evacuation of the clot and ligation of the bleeding vessels carried out. It is occasionally necessary to place mattress sutures in the oozing muscle ends. If the muscle ends are severed and oozing, drainage is indicated but closure without drainage is preferable and usually possible.[5] The peritoneum is usually opened to rule out co-existing intra-abdominal pathology. Cesarean sections have been performed when the gestation is near term. Sometimes, the clot is firmly imbedded in the muscle and cannot be evacuated. Under these circumstances, the mass may be left in situ and treated conservatively. Large masses have been treated this way with good results.

TABLE 2

Initial Diagnosis in 45 Cases of Hematoma of the Rectus Abdominis Muscle During Pregnancy

Rectus Muscle Hematoma	11
Abruptio Placentae	7
Twisted Ovarian Cyst	5
Ruptured Uterus	4
Acute Appendicitis	3
Pedunculated Myoma	3
Ectopic Pregnancy	1
Hydronephrosis	1
Extravasation of urine	1
Acute Cholecystitis	1
Ruptured Hydatid Cyst	1
Diagnosis Not Established	7

Hematomas of the rectus abdominis muscle have also been treated conservatively with good results. Certainly smaller hematomas may be adequately managed with bed rest, sedation, anti-tussive agents, ice packs, and abdominal binders.[1] However, if the hemorrhage continues or blood replacement becomes necessary, surgery is indicated.

Summary

1. Hematoma of the rectus abdominal muscle is a rare but important complication of pregnancy frequently mimicking an acute abdominal condition.
2. The condition is most often precipitated by coughing spells in the elderly multigravid patient during the last trimester of pregnancy.
3. The most important diagnostic tool is a high index of suspicion since the signs and symptoms of this illness are relatively constant.

4. A personal case history and review ot certain aspects of this disease are submitted.

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RESOLUTION

The following resolution was unanimously adopted by the MONTGOMERY COUNTY MEDICAL SOCIETY at its regularly scheduled meeting on 28 October 1964.

WHEREAS, The Department of Public Aid of the State of Illinois has seen fit to issue a list of drugs that may be used for patients receiving aid from this department, and

WHEREAS, This drug list is restrictive in that it invades the right of the physician in whom these patients have entrusted their lives and health from prescribing those drugs that in his judgment are the best for his patient, and

WHEREAS, The restrictions imposed in the selection of the drugs for this group denies them the best medical care which all physicians desire to give, Therefore,

BE IT RESOLVED, That the MONTGOMERY COUNTY MEDICAL SOCIETY urges its representative, the Illinois State Medical Socicty, and its member county societies to do everything in their power to help reverse this action of the Department of Public Aid in order that all citizens of the State of Illinois may have the right to the best drugs available.

TREATMENT OF PYOGENIC SKIN INFECTIONS WITH TOPICAL GENTAMICIN

M. Murray Nierman, M.D.
/calumet city

Considerable progress has been made in recent years in the treatment of pyogenic skin infections, largely through the use of topical and systemic antibiotics. The following report describes preliminary studies of a new topical antibiotic—gentamicin sulfate—a wide-spectrum, bactericidal complex derived from *Micromonospora purpurea*.[1,2]

Gentamicin is a mixture of two isomers that have the same antibacterial and pharmacologic properties (vide Black *et al.*[3]). Its mechanism or antibacterial action is not known. *In vitro* tests have shown it to be bactericidal to *Escherichia coli* and *Aerobacter aerogenes*, and particularly active against strains of *Pseudomonas*, *Proteus*, Group A. streptococci, and *Staphylococcus*[2]—including strains of penicillinase-producing staphylococci resistant to commonly used antibiotics.[4] Development of resistant strains is slow and stepwise.[4]

Gentamicin (injection) has been used successfully in the systemic treatment of urinary tract infections and burns[4,5] and in penumonia due to gram-negative bacteria.[6]

We recently studied gentamicin* ointment in the topical treatment of pyogenic skin infections in 106 private patients, 52 males and 54 females, whose ages ranged from nine months to 83 years. Previous treatment of 46 (43%) of these patients had been unsuccessful: in 17 of the 46, antibiotics including neomycin, polymixin B, bacitracin, and iodochlorhydroxyquin had been administered either topically or systemically, or both, without cure.

A variety of skin infections were treated in this study, including impetigo contagiosa, secondary infection (usually postoperative), folliculitis, stasis dermatitis with ulcer, and eczema with infection. Ten species of bacteria were isolated from the infections (Table 1), most frequently hemolytic and nonhemolytic staphylococci, and streptococci. Bacterial infection with more than one species was found in 9 cases.

In 62 of the 106 patients, topical gentamicin sulfate ointment t.i.d. was the only medication applied to the lesions. Nineteen of the 62 pa-

*Supplied as Garamycin®, by E. F. McMahon, M.D., Schering Corporation, Bloomfield, New Jersey.

TABLE 1

BACTERIA ISOLATED FROM THE SKIN INFECTION AND RESULTS OF TREATMENT

Infection	Excellent	Good	Poor
Hemolytic Staphylococcus aureus coagulase positive	11	4	
Hemolytic Staphylococcus aureus coagulase negative	12	3	
Nonhemolytic Staphylococcus aureus positive	1		
Nonhemolytic Staphylococcus aureus negative	2		
Alpha prime Streptococcus			1*
Escherichia coli		1	
Nonhemolytic Staphylococcus albus	1		
Bacillus subtilis	1	1	
Mixed infections of Staphylococcus and Streptococcus	4	1	1
Hemolytic Staphylococcus aureus coagulase negative; Beta hemolytic Streptococcus; and Escherichia	1		
Staphylococcus aureus coagulase negative and Alcaligenes faecalis	2		

*Treatment discontinued when possible sensitization developed.

tients were directed to apply compresses of 5% boric acid for 10 to 15 minutes when necessary, to remove crusts and make the lesions accessible to topical gentamicin.

Systemic antibiotics were administered concurrently in 34 cases.

The effects of different topical agents applied simultaneously to separate lesions in the same patient were explored in 20 cases. In 18 of these, gentamicin sulfate was compared with neomycin sulfate, polymixin B sulfate and zinc bacitracin.

As in the administration of any drug, duration of treatment with topical gentamicin varied with the extent and severity of the disease and on the conscientious application by the patient as directed. In patients with impetigo contagiosa the largest number (28 to 49) required treatment for three to seven days; the remaining 21 were treated for 2 to 28 days. Similarly, in patients with secondary skin infections, 5 of 16 were treated for seven days, the other 11 for 3 to 16 days. In patients with folliculitis, treatment ranged from 3 to 38 days.

In eczema with infection, duration of treatment ordinarily depends on the duration and severity of the disease; however, cases of long-standing disease frequently require only brief treatment. In the 9 patients with infected eczema in this study, treatment ranged from 3 to 21 days.

Stasis dermatitis with ulcers would be expected to require longer periods of treatment, and this was borne out by the fact that 3 of 9 patients were treated for 30 days, the 6 others for 20 to 90 days. In these patients, the ulcer was packed with gentamicin and a gelatin powder. Betamethasone cream was then applied to the skin about the ulcer and the area was covered with a paste boot. This dressing was changed usually about twice a week.

In five cases, gentamicin oitment was used prophylactically following dermabrasion for facial scarring. Treatment lasted for 5 to 15 days, usually 12 days.

When infection cleared rapidly and topical gentamicin was the only antibiotic used, the response was rated *excellent*. When infection healed, but not as early in the course of the disease, or when concurrent treatment with systemic antibiotics was required, results were rated as *good*. When healing of the pyoderma did not occur, the response was rated *poor*. Results in use of gentamicin after dermabrasion were rated *excellent* or *good* according to rate of healing, *poor* if infection developed.

Results

For the 106 patients, excellent results in the treatment of pyogenic disorders were obtained in 74 (70%); 28 (26%) were rated as good, and 4 (4%) as poor. Results by diagnosis are given in Table 2; by species of bacteria in Table 1.

Of the four treatment failures (4%), one was an uncooperative patient with impetigo contagiosa who did not use compresses to remove the crusts of the lesions. The second was a case of infected umbilical pilonidal sinus. This disorder, which does not respond to known topical or systemic antibiotics, almost invariably requires surgery. Gentamicin was tried in this case because of the exceptional results obtained with it in other skin ulcers. In the third case, possible sensitization developed and treatment was discontinued. The fourth treatment failure was a case of pyoderma of the external ear canal associated with pityriasis rubra pilaris. The pa-

TABLE 2

Results of Treatment by Diagnosis

Disease	Number of Patients	Results Excellent	Good	Poor
Impetigo contagiosa	49	37	11	1
Secondary infection (10 patients postoperative)	16	9	7	0
Folliculitis	10	6	3	1
Eczema with infection	9	8	1	0
Stasis ulcer	9	6	3	0
Post-dermabrasion	5	3	2	0
Pyoderma gangrenosa	2	2	0	0
Sycosis barbae	2	2	0	0
Pyoderma in pityriasis rubra	1	0	0	1
Pyoderma in pityriasis alba	1	1	0	0
Pilonidal sinus	1	0	0	1
Furunculosis	1	0	1	0
Total	106 (100%)	74 (70%)	28 (26%)	4 (4%)

TABLE 3

Comparison of Effectiveness of 0.1% and 0.3% Gentamicin Sulfate Ointment in 60 Patients

Percentage of Patients Treated with	Results
0.1% ointment	
72%	excellent
25%	good
3%	poor
0.3% ointment	
68%	excellent
28%	good
4%	poor

tient had not responded to topical treatment with iodochlorhydroxyquin and hydrocortisone, and did not respond to treatment with gentamicin, but improved subsequently when treated with betamethasone cream alone.

We compared the effects of other topical antibiotics applied simultaneously to different sites in the same patient. In 4 of 20 cases studied, gentamicin sulfate was more effective than neomycin sulfate. In no case was neomycin sulfate more effective. In the remaining 16 cases, gentamicin and the other topical antibiotics used were equally efficacious.

Side effects were limited to a localized skin reaction in 1 (1%) of the 106 patients treated. In this patient, a papular vesicular eruption appeared on the nape of the neck, and treatment with gentamicin was discontinued. This patient had been treated previously with neomycin.

Comment

1. We are continuing our investigation of a useful modification of a widely-used treatment of stasis ulcer with which we have had excellent results: the ulcer is packed with gentamicin ointment and gelatin powder; betamethasone cream is applied to the surrounding skin which as a rule is eczematous. Then both ulcer and adjacent skin are covered with a paste boot. Both the infection and the inflammatory tissue reaction are treated by this method.

2. We compared the effectiveness of 0.1% gentamicin sulfate ointment with that of the 0.3% preparation in 60 patients (Table 3). These results are so similar that there seems to be no need for the stronger preparation: the 0.1% ointment is as effective as the 0.3%.

3. No valid comparison can be made between response in the patients treated with gentamicin only and those treated with gentamicin and systemic antibiotics. Systemic antibiotics were given only when fever, severe generalized involvement, or possible bacteremia were present, or if the lesions were relatively inaccessible to topical application.

4. This study emphasizes that gentamicin is not only a potent antibiotic for treatment of pyogenic skin infections, but that applied topically, it has a low index of sensitization and irritation. Sensitization was reported in one patient who had been treated previously with neomycin. Cross sensitization is unlikely, however: persons known to be sensitive to neomycin have had no response to challenge with gentamicin.[7]

Summary

Gentamicin, a new, potent, wide-spectrum antibiotic with low topical toxicity, proved effective treatment in 102 of 106 patients with pyogenic skin infections. Ten strains of bacteria, staphylococci primarily, were identified in the diseases treated, which included impetigo con-

tagiosa, secondary infection, folliculitis, and infected eczema. Excellent results were obtained in 6 of 9 cases of stasis ulcer treated with a modified packing technique.

Localized inflammation that required discontinuance of treatment developed in 1 patient.

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FOUNDATION REPORT

A New Source of Edible Fats

The soybean which for many ages has been a staff of life in the Orient has become in the 20th century the chief source of visible food fats in the United States (Table 1). The annual production of soybean oil is now over 5,000 million pounds and is greater than the combined output of all other edible vegetable oils as well as the combined annual production of all edible animal fats (Table 1). Soybean oil now constitutes 72% of the oil consumed in margarine, 48% of the oil consumed in shortening, and 60% of the oil consumed in salad and cooking oils.[1] Since soybean oil is now an important constituent of many foods as well as the major source of polyunsaturated fatty acids,[2] it seems desirable to discuss briefly the methods by which it is produced, its chemical composition, and its uses in foods.

TABLE 1.

U.S. Production of Edible Fats and Oils and their Consumption in Foods (9, 10)

(Million Pounds)

	Production (1960)	Consumption in Foods* (1962)
Vegetable Oils		
Soybean Oil	5950**	3878
Cottonseed Oil	1875	1299
Corn Oil	340	318
Peanut Oil	95**	62
Safflower Oil	-	35
Olive Oil	5	58
Coconut Oil	637	227
Meat Fats		
Lard	2600	1977
Tallow	340	407
Butter	1500	1382

*Includes vegetable oils used in manufacture of shortening and salad and cooking oils for export and overseas donation, estimated at approximately 700 million pounds.
**Includes oil equivalent of exports.

SOYBEAN OIL IN OUR FOODS

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TABLE 2.

Fatty Acid Composition of Soybean Oil and Other Major Food Fats and Oils (% of Total Fatty Acids)

	Saturated Fatty Acids	Unsaturated Fatty Acids		
		Oleic	Linoleic	Linolenic
Soybean Oil	15 -	24 -	55	7
Cottonseed Oil	26	22	52	trace
Corn Oil	14	31	55	trace
Peanut Oil	21	49	30	trace
Olive Oil	15	73	12	trace
Safflower Oil	10	14	75	trace
Butter	63-70	28-31	1.0-2.5	0.2-0.4
Lard	45	46	9	-
Beef Tallow	46	50	4	-

TABLE 3.

Chemical Composition of Commercial Soybean Lecithin

Soybean oil	35	%
Lecithin	19.7	%
Cephalin	19.7	%
Inositol Phosphatides	21.0	%
Carbohydrates (Sterol glucoside)	3.6	%
Moisture & others	1.0	%
Vitamins		
Inositol	30.0	mg/g.
Choline	29.3	mg/g.
Tocopherol	1.3	mg/g.
Biotin	0.42	mcg/g.
Folic Acid	0.60	mcg/g.
Thiamin	0.115	mcg/g.
Riboflavin	0.33	mcg/g.
Pantothenic Acid	5.59	mcg/g.
Pyridoxine	0.29	mcg/g.
Niacin	0.12	mcg/g.

The Production of Edible Soybean Oil

Crude soybean oil as expressed or extracted with solvent from the soybean is brownish yellow in color and has a characteristic flavor. This crude oil is first treated with water. Phosphatides, carbohydrates, proteins and other mucilaginous materials are hydrated, become insoluble in oil, and precipitate out as a wet "gum." Dehydrating the wet gum under vacuum yields a viscous liquid which is sold commercially as soybean lecithin. The "degummed" oil is then treated with an aqueous alkaline solution to remove free fatty acids as soaps. At the same time, some pigments are removed. This refined oil is further decolorized by treating with activated clay. Finally, the oil is deodorized by vacuum steam distillation to produce a bland edible soybean oil.

Most of the soybean oil used in margarine and shortening is partially hydrogenated. The refined soybean oil is treated with hydrogen under pressure in the presence of a nickel catalyst to partially saturate its double bonds with hydrogen. This treatment yields a product which is solid at room temperature and has improved flavor stability.

Recently, a new salad and cooking oil made from soybean oil has been marketed. This product is produced by partially hydrogenating soybean oil to improve the flavor stability. Hydrogenation increases to some extent the saturated triglycerides in the oil. These triglycerides are removed by a process known as winterization. In winterization the oil is kept at 42°F. for several days until the more saturated triglycerides are crystallized. The precipitates are then removed by filtration. The partially hydrogenated and winterized soybean oil is therefore a liquid oil at room temperature with a high degree of unsaturation and good flavor stability.

Composition of Soybean Oil

The major component of soybean oil is triglyceride which constitutes approximately 99% of the edible oil. The triglycerides are composed of 95% fatty acids and 5% glycerol. The fatty acids in turn, contain approximately 7% linolenic acid, 55% linoleic acid, 24% oleic acid and 15% stearic acid. A representative analysis of the fatty acids in soybean oil and a comparison with other major food fats and oils is shown in Table 2.

Two minor components of refined soybean oil which are of biological interest are sterols and tocopherols. Edible soybean oil contains 0.15—0.38% of sterols, 10—15% of which are present as esters with fatty acids. The sterols in soybean oil are composed of sitosterols, stigmasterol, and dihydrositosterol. Edible soybean oil contains about 0.15% of tocopherols[3] which are a mixture of φ, γ, and ζ isomers.

The phosphatides which are removed from soybean oil during refining are commercially marketed as soybean lecithin, a brown viscous liquid, composed of soybean oil, lecithin, cephalin, inositol phosphatides and a number of vitamins. (Table 3.) A more palatable form of soybean lecithin is produced as pale yellow

granules by precipitating the phosphatides from soybean lecithin with acetone. The fatty acids in soybean phosphatides are similar to those in triglycerides except that there is about 10% more palmitic acid and a reduced amount of oleic acid in the phosphatides.

Flavor Stability of Soybean Oil

During storage all fats and oils gradually react with oxygen to form hydroperoxides. When the peroxide value of fats and oils reaches about 20 meq./kg. or higher, they become rancid. Soybean oil also develops a characteristic beany and grassy flavor known as "reversion" when the peroxide value of the oil is still as low as a few meq./kg. Although soybean oil as now produced is the major food fat in the United States, research workers believe that further improvement in its flavor stability will lead to new markets. To solve this flavor problem, research is being conducted by government, university and industry scientists. At Rutgers University an attempt is being made to chemically identify the compounds which are responsible for the "reversion" factor. It is believed that mechanisms can be postulated once the chemical nature of the "reversion" compounds are known, and that the problem of "reversion" can be better solved if the mechanism is completely understood. At the Northern Regional Research Laboratory of the USDA methods are being investigated to lower the content of linolenic acid without substantial decrease of the essential linoleic acid.

Uses of Soybean Oil

Soybean oil is used as a salad oil, in mayonnaise, salad dressings and canned soups and fishes. The partially hydrogenated soybean oil is used in margarine, shortening, and confectionery and as a cooking oil. The continued effort of the industry to improve the quality of soybean oil through better processing technology has resulted today in an oil which may be used for most general food purposes.

Until the recent emphasis on the nutritional value of polyunsaturated fatty acids, edible soybean oil was usually hydrogenated from an original iodine value of about 130 to about 75 for shortening and to about 80 for margarine.

TABLE 4.

Fatty Acid Composition (%) of Commercial Household Shortenings and Margarines

	Saturated Fatty Acids	Unsaturated Fatty Acids		
		Monoenoic	Dienoic	Trienoic
Type Shortening				
All Vegetable fat — "regular"	19-33	53-75	6-14	0-1.0
All Vegetable fat — "special"	22-32	44-55	22-33	0-2.5
Meat fat and Vegetable fat	30-50	37-57	6-13	0-0.6
All meat fat	34-45	44-53	7-13	0-1
Type Margarine				
"Regular"	16-25	42-63	10-20	0-0.5
"Special"	15-30	30-57	22-40	0-0.5
Butter Fat	63-70	28-31	1.0-2.5	0.2-0.5

The conventional "regular" process of manufacture is now being replaced by a new "special" process in which a portion of the oil is only slightly hydrogenated to an iodine value of, for example, 113. This slightly hydrogenated oil is then blended with a highly hydrogenated oil to produce the required flavor stability and consistency. Margarine and shortening manufactured in this manner contribute more polyunsaturated fatty acid to the diet than those manufactured by the conventional method (Table 4). Statements on these special products have recently been published by the American Medical Association.[4,5]

Importance of Soybean Oil

Recent medical advances indicate a potentially beneficial dietary effect of polyunsaturated fatty acids upon nutrition and disease. Kinsell, el al[6] and many others have demonstrated that vegetable oils in the diet can be used to lower the serum cholesterol level. The important work of Arild Hansen and associates on the relation of linoleic acid to infant feeding is summarized in Acta Pediatria.[7] Recently, labeled arachidonic acids were fed to mice and the radioactive elements were located in the hormone prostaglandin which is known to have the function of lowering blood pressure.[8]

As success with vegetable oil-containing diets, prescribed currently for small groups, is projected upon a large population, the problem of the supply of vegetable oils arises. As shown in Table 1, soybean, cottonseed and corn oil make up 98% of the highly polyunsaturated vegetable

oils consumed in the United States. Since cottonseed oil is the by-product of cotton and corn oil the by-product of cornstarch, it is not likely that the production of these can be greatly increased even if there is a demand. Safflower oil, though it contains an unusually high percentage of linoleic acid, comprises less than 1% of the total fats and oils consumed in this country. This leaves soybean oil as the only oil in relatively abundant supply which contains more than 50% of linoleic acid. Because soybean oil is a wholesome oil and because its production can be easily, economically and quickly expanded, it seems desirable to recommend the consideration of its use in experimental diets for biological studies. Furthermore, it seems desirable to recommend the encouragement of technical research for the improvement of the flavor stability of soybean oil with optimum nutrient retention.

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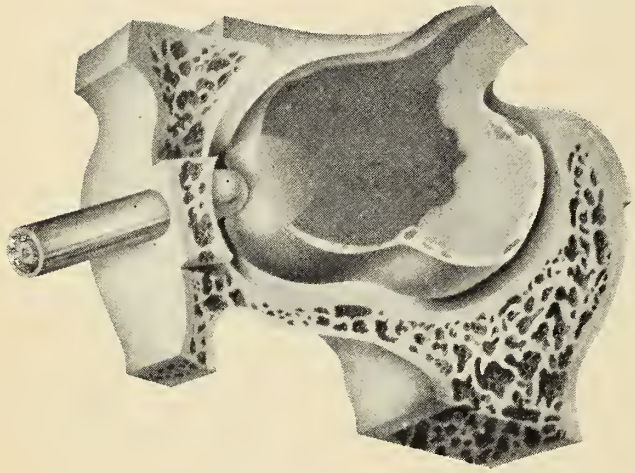
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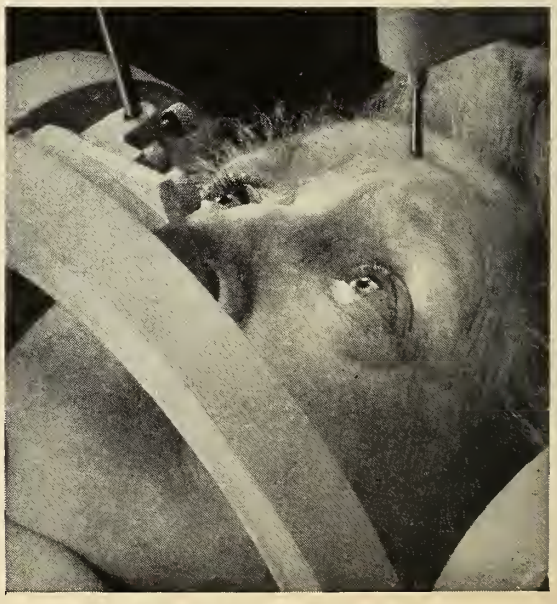
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1. Rand, R. W.: Western J. Surg. 72:142, May-June, 1964. **2.** Morlino, F. J. et al.: Paper presented at Stanford University Medical School, Palo Alto, Calif., Jan., 1964.

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DEATHS DUE TO CAR DRIVEWAY ACCIDENTS

Car driveway accidents occur with increasing frequency, especially in our burgeoning suburbs. Usually these types of accidents involve small children who are seriously injured, usually fatally, when struck down by motorists who back their cars out of driveways. Often the driver does not look into the rear view mirror of his car to see if the way is clear. Frequently the child is too small to be seen in the rear view mirror by the driver.

Prompted by the death of a child as the result of a car driveway accident, the authors undertook a survey of twelve northwest suburban communities of Chicago for 1963 and 1964 to determine the number of children injured or killed in this type of mishap. During this period nine children were fatally injured. The ages of the children ranged from thirteen months to nine years, most of the children being under four years of age. A survey taken with the cooperation of the Cook County Traffic Safety Commission was helpful in compiling the death total. It is interesting to note that the accidents occurred in the newer suburbs. Older suburban communities such as Evanston, Skokie and Niles reported no fatalities or injuries.

A national survey taken by the National Safety Council showed that three-hundred children were fatally injured in 1963 as a result of vehicle accidents on home property. The great majority of these was due to driveway accidents involving the backing out of cars.[1]

It is difficult to estimate the frequency of this type of accident, since a separate classification is not always kept by the police and other accident prevention agencies. There is probably a larger number of fatalities than these figures indicate. The statistics do not take into account the significant number of seriously injured children. There is undoubtedly a great potentiality for the occurrence of this type of accident if the large number of bicycles and tricycles struck by motorists backing out of driveways is taken into account.

The following recommendations are suggested to prevent car driveway accidents:

- Doctors, as well as other drivers who make home visits, should be constantly on the alert for this ever present danger.
- A state wide or nation wide campaign should be instituted to alert parents to the danger of car driveway accidents, and to the hazard of allowing small children to play on driveways behind parked cars.
- Specific safety precautions involving the parking of cars in driveways are suggested: The question of parking cars so that the front end of the automobile faces the street should be considered. Most of the driveway accidents occur when the automobile is backed out and very few occur when the car is guided into the driveway. It is much easier to see a small child over the sloping hood of a car, than by looking behind the trunk of a car.
- Parents must educate their children to keep bicycles, tricycles and gocarts off the driveways, and particularly not behind parked cars.
- Circular or angled driveways should be considered in building homes. This would allow the motorist to observe any child behind his car as he walks to it.
- A car should be parked so that its back end is fairly close to the street, leaving little space, which would discourage a toddler from playing behind the vehicle.
- If the rear end of the car cannot be seen as the driver leaves a home, he should circle his car before entering it.
- Parents should keep the doors of the car closed so children cannot enter. The car should be in parking gear and keys should never be left in the ignition. This may prevent children from precipitating car driving accidents.

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Harvey Kravitz, M.D.
Alvin Korach, M.D.

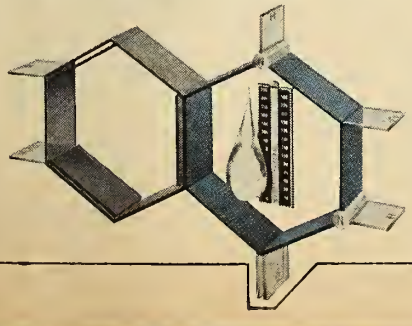
(Editorials continued on page 692)



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CONTRAINDICATION: Anuria.

1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. J. Amer. Geriat. Soc. 11:945 (Oct.) 1963.

2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

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Editorials (Continued from page 688)

IMPROPER IMBIBING

It's not only how much you drink but how much you eat that may spell the difference between intoxication and sobriety.

Slightly more than a bottle of wine, or three stiff, eight-to-one, martinis are necessary—if one drinks with meals—to build an average-sized man's blood alcohol up to the level where his sobriety is legally in question.

But if the drinking is done on an empty stomach, only half as much of these beverages will usually raise blood alcohol to the same point, according to studies carried out jointly by Dr. Giorgio Lolli, New York, and an Italian colleague and reported in the current issue of the *Quarterly Journal of Studies on Alcohol.*

Their work also shows that the moderate imbiber, particularly the person who likes a glass or two of wine with his meals, can drink without affecting physical or mental performance—as long as he eats, too. If he drinks on an empty stomach, however, his efficiency may be affected, even at the same blood alcohol levels.

In most states, a blood alcohol level of 0.05 per cent is the point at which, legally and medically, intoxication is suspected. But even at half that figure, some drinkers show the effects of alcohol, according to Dr. Lolli and Dr. Luigi Meschieri.

The two physicians are associated, respectively, with the International Center of Psychodietetics, New York and Rome, and the Italian National Institute of Psychology.

To carry out their experiments, the investigators selected 40 young medical students by subjecting them to a battery of medical and psychological examinations to ensure that they were in as good health as possible. Many studies of the effects of alcohol, Dr. Lolli points out, are performed on clinic patients, already sick or disturbed, a factor which may affect the test results.

It was necessary also to find a method of producing the same blood alcohol concentrations on a full and empty stomach. The two clinicians determined that blood alcohol levels would be almost identical if the amount of 12 per cent alcohol, taken as wine or ethanol in water, consumed on an empty stomach was doubled with a 1,500 calorie meal. This finding, which they say has not been used before, enabled them to proceed with their experiment.

In a quiet laboratory setting, the students were administered precise amounts of 12 per cent red table wine and a solution of 12 per cent ethanol and water at a rate of 0.2 grams per kilogram of body weight, which averaged about five ounces or a little more than one wineglass per person. Then, twice the amount of wine or alcohol (0.4 gm. per kg. of body weight —equal to about 10 ounces of wine or an extra-dry martini) was consumed with a 1,500 calorie meal. In each case, according to the investigators, the peak blood alcohol levels obtained on either a full or empty stomach were about 0.02 per cent or less.

Following each method of drinking, the subjects were given tests to evaluate 23 variable psychological and physiological functions—speed, alertness, motor coordination, perception, judgment, accuracy, etc., under varying conditions.

At these low blood levels, the physicians report, only nine test variables were unchanged with wine on an empty stomach. On the other hand, 20 psychological and motor functions remained unaffected after wine was drunk with meals. Oddly, in the empty stomach series, six functions were improved on an empty stomach, four impaired and four uncertain.

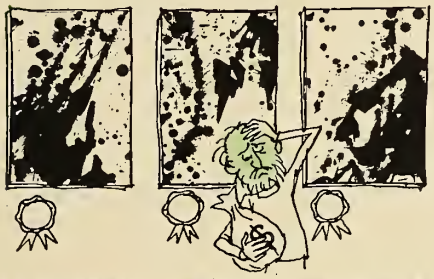
With moderate amounts of ethanol and water, 12 of the variables were unchanged, no matter whether the students drank on a full or empty stomach. However, most of the variables which showed change were impaired.

When larger amounts of alcohol were con-

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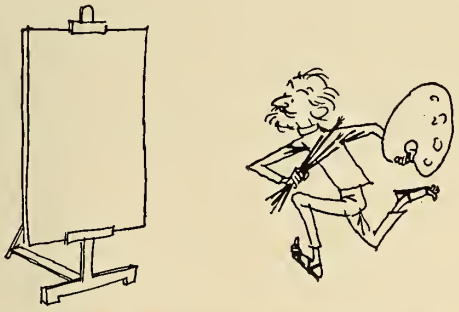
Vertigo couldn't stop beat Nick from painting...



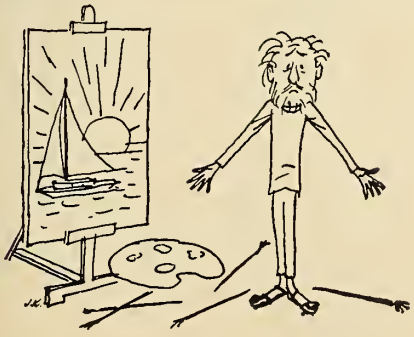
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Precautions and side reactions: Frequent, short-lived reactions include: cutaneous flushing, sensations of warmth, tingling and itching, burning of skin, increased gastrointestinal motility, and sebaceous gland activity. In explaining these reactions to the patient, it is suggested that they be regarded as a desirable physiological sign that the nicotinic acid is carrying out its intended function of vasodilation. Because of this vasodilation, severe hypotension and hemorrhage are obvious contraindications to Antivert therapy.

Dosage: One tablet or one to two teaspoonfuls (5-10 cc.) t.i.d. just before meals. Specific requirements for individual patients should be determined by the physician.

Supplied: Tablets in bottles of 100 and 500. Syrup in pint bottles. Rx only.

*Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

Antivert® meclizine HCl nicotinic acid

stops vertigo

TABLETS: (meclizine HCl 12.5 mg. and nicotinic acid 50 mg.)

SYRUP: (each 5 cc. teaspoonful contains meclizine HCl 6.25 mg. and nicotinic acid 25 mg.)

New York, N. Y. 10017
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

Editorials (Continued from page 692)

sumed, either as wine or in water, the investigators found quite another story. If blood alcohol concentration approaches the 0.05 per cent level, then the so-called "meal effect" disappears. In fact, the investigators say, physiological and psychological impairment was greater on a full than on an empty stomach, possibly due to the "combined impact of a heavy meal and large amounts of alcoholic beverages."

To carry out this set of experiments, the subjects received 0.6 gm. of wine or ethanol and water per kg. of body weight on an empty stomach and twice that amount, or 1.2 gm., with a meal. The latter amount in a 154 lb. man equaled 30 oz., somewhat more than the usual bottle of wine or the equivalent of three martinis.

At this rate of alcohol consumption, blood levels averaged about 0.04 per cent on an empty stomach and slightly over 0.05 per cent on a full stomach. While not as many variables (13) were tested in this group, every one was found to be impaired in every subject.

HEART DISEASE IN JAPAN

Dr. Wilhelm Raab, University of Vermont emeritus professor of experimental medicine, has just returned from a three-week trip to Japan where he presented a paper on his recently developed cardiac prediction test, and where he found further comparative statistics to support his theory that the rich, soft, nicotine-stained, fast-paced life in the U.S. conditions citizens here to "premature vulnerability to heart disease."

The septuagenarian, who exercises every day "except on my birthday," presented his paper at the International Congress on Sports Sciences, and later lectured at five universities in Japan. He was accompanied by his wife.

He reports that the incidence of myocardial infarction is 200 times greater in the U.S. than in Japan. The incidence of severe arteriosclerosis is 10 times greater here than in Japan.

According to Dr. Raab, the remarkably low incidence of coronary heart disease in Japan as compared with its "enormous prevalence" in the U.S., is no longer believed to be due merely to the low fat intake of the Japanese people.

"Greater emphasis on physical education and exercise, different general living habits, and a more serene philosophy of life seem to be equally responsible for this striking, enviable contrast in cardiac health," he declares.

He goes on to say that a great deal of excellent research is being conducted in some of the Japanese institutions.

In order to clarify the factors responsible for the low incidence of heart disease in Japan and to apply them, if possible, for practical prevention in this country, Dr. Raab conferred with several Japanese doctors, including Prof. Eiichi Kimura of Tokyo. Dr. Kimura worked with Dr. Raab and with Dr. Eugene Lepeschkin at the University of Vermont Heart Unit at the De-Goesbriand Memorial Hospital. It was agreed that the UVM cardiac predisposition test will be applied also in Japan for epidemiologic studies.

When Dr. Kimura returned to his native country, he was succeeded here by Dr. Yoshio Nawata who came from Japan's leading Heart Research Institute in Kurume.



PERCODAN®

in moderate to moderately severe pain...

Each scored yellow PERCODAN* Tablet contains 4.50 mg. oxycodone hydrochloride (Warning: May be habit-forming), 0.38 mg. oxycodone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.

Throughout the wide middle range of pain PERCODAN assures speed, duration, and depth of analgesia by the oral route plus the reliability that counts so much. PERCODAN acts within 5 to 15 minutes...usually provides *uninterrupted* relief for 6 hours or longer with just *1* tablet...rarely causes constipation.

Average Adult Dose—1 tablet every 6 hours. **Precautions, Side Effects and Contraindications**—The habit-forming potentialities of PERCODAN are somewhat less than those of morphine and somewhat greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also Available:** PERCODAN®-DEMI, each scored pink tablet containing 2.25 mg. oxycodone hydrochloride (Warning: May be habit-forming), 0.19 mg. oxycodone terephthalate (Warning: May be habit-forming), 0.19 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine. *U. S. Pats. 2,628,185 and 2,907,768

Literature on request.

ENDO LABORATORIES INC., Garden City, New York

Endo®

ILLINOIS MEDICAL ASSISTANTS ASSOCIATION REPORT

The I.M.A.A. Professional Symposium held recently in Danville, Illinois was very successful. Sixty members attended the all-day session which began with a tour of the Veteran's Administration Hospital. Dr. S. L. Levin, Vice President of the Vermilion County Medical Society welcomed the members and Dr. James Harding, Chairman of the local advisory committee of the Vermilion County Medical Assistants Association also extended greetings. The Symposium was arranged and conducted by the Vermilion County Medical Assistants Association under the capable chairmanship of Miss Marialyce Nimrick.

LET'S
HAVE A
SYMPOSIUM!

Rev. Earl Livengood, of St. James Methodist Church, Danville, Illinois, talked concerning the importance of faith in treating the sick. He spoke of the role of the minister and the physician, not only in treatment of the patient per se but also in "treatment" of the patient's family.

Mr. Don Baldwin, Danville attorney, spoke on the medico-legal aspects of medical practice. He discussed important factors concerning the possibility of malpractice suits and stressed the importance of accurate records in the doctor's office.

Dr. V. J. Soukoup, with the Veteran's Administration Facility, spoke of the role psychiatry plays in the practice of medicine. He explained that patients for psychiatric care are divided into three groups—psychosis, neurosis and personality disorders.

Dr. Harold Keschner, pathologist at St. Elizabeth Hospital, Danville, Illinois, presented a discussion of the pathologist's and laboratory part in the diagnosis and treatment of illness. He illustrated his talk with slides of various laboratory procedures.

All members who attended felt the entire Symposium was very worthwhile and appreciated the insight they received to help them in their daily work. Those who were in charge and all of the members of IMAA wish to convey their thanks to our speakers who so graciously gave of their time to be with us that day. Also thanks to the Veteran's Administration for permitting us to tour their hospital.

Wouldn't your Medical Assistant benefit from such a Symposium? Why not make arrangements so she can attend the next one and find out from her how worthwile they really are?

PULSE
of the ILLINOIS STATE MEDICAL SOCIETY

A Service of the Public Relations Division *December, 1964*

Canadian Medicine's Fight Against Government Control Teaches Lesson—It Can Happen Here!





Enthusiastically appreciated as a "word to the wise" was B. E. Freamo's report to Illinois physicians at the recent ISMS legislative conference. In the photo at left, Freamo, second from right, is thanked for his talk by Dr. Jack Means of the Mason County Medical Society. The man behind the handshake is Dr. Glenn Tomlinson of the Logan County Medical Society. Looking on, far right, is Dr. A. R. Rarick of the Vermilion County Medical Society. Pictured at right, Freamo is flanked by Mrs. Willard C. Scrivner, auxiliary president, and Dr. V. P. Siegel, legislative chairman.

Illinois physicians heard firsthand of the Canadian medical profession's struggle against government control of health care at the recent ISMS legislative conference in Chicago's Drake Hotel.

County society officers and legislative affairs chairmen from throughout the state were cautioned by B. E. Freamo that government encroachment on Canadian medical practice developed "in a country which in many ways is similar to your own."

Freamo is secretary of the Medical Economics Department of the Canadian Medical Association. He said:

"The proponents of 'free' medical care in my country . . . are socialist-oriented politicians whom I believe want to control doctors and the practice of medicine. In Saskatchewan, chance, political opportunism and our particular type of democratic government combined to allow them to implement their compulsory program.

"Since this crisis, we have had an election in Saskatchewan and a free enterprise government has replaced the socialist planners. However—typical of any government's attitude toward an established welfare program—very few changes have been made in the operation of the Saskatchewan Medical Care Plan."

On the other hand, Freamo pointed out that the province of Alberta has publicly repudiated government control of medicine and has developed its own voluntary health insurance program which now covers 80 per cent of the population.

To capture public support in its fight against federal adoption of a compulsory health program for all the provinces, the Canadian medical profession hopes to pit the success of the Alberta plan against the high tax expense and inpracticality of the Saskatchewan program.

Freamo concluded that the medical profession must influence government to strengthen the position of the voluntary insurance system.

Presbyterian-St. Luke's Elects Campbell as Prexy

Dr. James A. Campbell has been elected president and chief executive officer of Presbyterian-St. Luke's Hospital in Chicago. He has been chairman of medicine at the hospital since 1958.

Dr. Campbell is chairman of the ISMS Committee on Medical Education and Hospitals.

COUNTY CAPSULES

★ ★ ★

EDGAR COUNTY Medical Society has elected Dr. Gordon Sprague of Paris, president; Dr. Cynthia Morton of Chrisman, vice-president; and Dr. Jerry Ingalls of Paris, secretary-treasurer and delegate to ISMS.

★ ★ ★

KANE COUNTY Medical Society has elected Dr. William G. Eilert of Aurora, president; Dr. Robert W. Ollayos of Elgin, vice-president; and Dr. Robert C. Cummins of St. Charles, secretary-treasurer.

★ ★ ★

LACOME COUNTY Medical Society has elected Dr. C. G. Stoll of Lawrenceville, president; Dr. E. A. Fahnestock of Bridgeport, vice-president-secretary.

★ ★ ★

LASALLE COUNTY Medical Society has elected Dr. D. R. Hanley of Streator, president; Dr. Margaret Stanmar of LaSalle, vice-president; Dr. J. M. Hackett of Oglesby, secretary-treasurer.

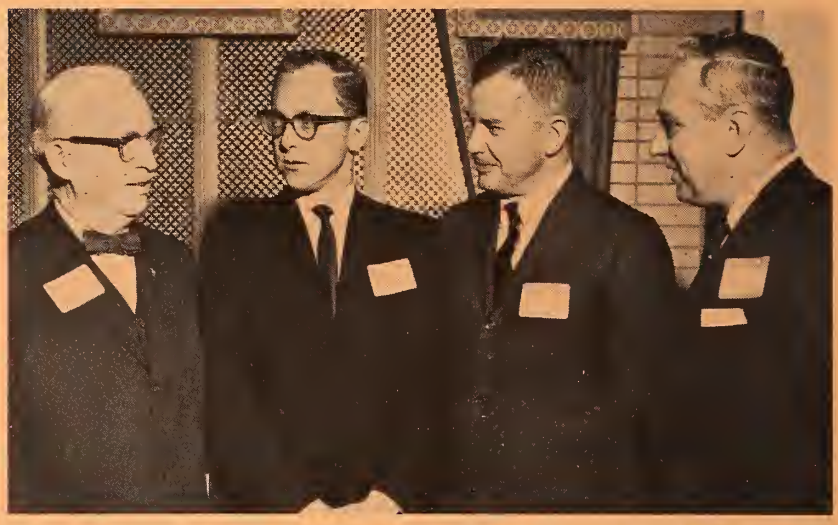
★ ★ ★

ROCK ISLAND COUNTY Medical Society will hear Dr. Francis L. Lederer of the University of Illinois Medical Center speak on "Otolaryngology on the Misadventure Theme" at a dinner-meeting at 6:30 p.m January 12 at the Tower Restaurant in Moline.

★ ★ ★

VERMILION COUNTY Medical Society will hear Dr. Hyman J. Zimmerman of Chicago Medical School speak on "Serum Enzymes in Disease" at a dinner-meeting at 6:30 p.m. January 5 at the Hotel Wolford in Danville.

Pharmaceutical Company Management Representatives Feted at ISMS Affair



Discussing mutual objectives are Dr. Leo P. A. Sweeney, ISMS Public Relations Committee chairman; James R. Slawny, director of the society's Division of Public Relations; Royce H. Coulson of Eli Lilly & Co.; and R. L. Schlick of E. R. Squibb & Sons. The occasion was the ISMS first annual luncheon for management and sales representatives of some of the country's leading pharmaceutical houses. Theme of the affair—designed to promote a spirit of cooperation—was "Meet Your State Medical Society." Following introductory remarks by Dr. E. A. Piszczek, ISMS president, a slide presentation on the functions and objectives of the society was given by Robert L. Richards, ISMS executive administrator. Society officers and staff members were hosts to the pharmaceutical representatives who described the afternoon at Chicago's Hotel Continental as both "informal and informative."

McLean Society Hosts Astronauts' Physician



Speaking of space are Dr. Charles A. Berry, left, physician for America's astronauts, and Dr. G. B. McNeeley, president of the McLean County Medical Society. Dr. Berry, chief of the National Aeronautics and Space Administration's Manned Space Center Medical Office, was guest speaker at a recent society meeting. Dr. McNeeley, too, has been active in aero-space medical work as secretary-treasurer of the Space Medicine Branch of the Aero-Space Medical Association.

Physician-Lawyer Cited 'Distinguished Alumnus'

Dr. Arthur A. Loring of Chicago has been presented the 1964 Distinguished Alumnus Award of the Chicago Medical School Alumni Association for his career of service as a physician, lawyer and medical educator.

He has taught at the school for 40 years. Dr. Loring is one of the fewer than 100 persons in the United States who are licensed to practice both medicine and law.

Dr. Max Sadove Gets Seat on Oak Park School Board

Dr. Max S. Sadove of Oak Park has been elected to that city's elementary school board of education. Dr. Sadove is head of the departments of anesthesiology at the University of Illinois College of Medicine and its Research and Education Hospitals.

A past president of the Illinois Society of Anesthesiologists, Dr. Sadove is a member of the ISMS Sub-Committee on Anesthesiology.



Drill Preps State for Disaster

Cite ISMS as 'Pioneer'

Disaster care workers from communities throughout Illinois recently were put through their paces in uncrating, setting up and operating one of the 200-bed portable hospitals stored in basements of large buildings across the nation. The occasion was the Civil Defense Emergency Hospital drill at York Community High School in Elmhurst. In the bottom picture at left, Dr. Max Klinghoffer, ISMS Disaster Medical Care Committee chairman who supervised the maneuvers, gets an assist from a nursing nun in setting up lights for an operating room. At right, a group of "students" learns how to mantle an oxygen unit. Two physicians and a nurse, at top left, follow the prescribed procedure for a new emergency patient in the treatment ward. Said Col. Donovan M. Vance, director of the Illinois Civil Defense Agency: "The Illinois State Medical Society is to be congratulated for its efforts in pioneering such an important program."





'Medical Self-Help Training' Course Pays Dividends for Chicago Grandma

How effective was the ISMS "Medical Self-Help Training" program?

The 16-week series of half-hour shows, telecast by WTTW less than a year ago, has paid off in practical dividends for a Chicago grandmother. Following is her eloquent testimony in a letter to Dr. Max Klinghoffer, instructor of the course:

Last year I became a member of your Medical Self-Help Program. I took the test and passed, correctly answering 53 out of 60 questions. I have not had an opportunity to use this knowledge until just a week ago when my grandson fell and broke his arm . . . the ulna and radius just above the wrist.

I knew immediately that the bone was broken and I also knew just what to do. I got three table knives to use for splints and had my husband get a piece of board.

After arriving at the hospital emergency room, the doctor in charge said to me: 'This is a first-class bandage. Did you do it?' I was very proud to say that I did and that I had taken a course in first-aid and had passed the test.

I felt very good knowing that I knew exactly the right thing to do. If I never get to use this knowledge again, I will feel it was all worth while . . . and want to thank you for the opportunity. There should be more such programs on TV.

Sincerely,
Mrs. Irene Kolvek
4848 North Moody Ave.
Chicago, Illinois

Elect Dr. Ira Tresley Vice-President of National Plastic Surgery Academy

Dr. Ira J. Tresley of Chicago has been elected midwest vice-president of the American Academy of Facial Plastic and Reconstructive Surgery which was formed at a recent meeting through the merger of two national associations.

The merged groups were the American Otorhinologic Society for Plastic Surgery and the American Society of Facial Plastic Surgery.

The new organization—expected to include about 700 physicians—will consist for the most part of otolaryngologists who perform plastic and reconstructive surgery on the head and neck.

Dr. Tresley is assistant professor in the Department of Otolaryngology at Northwestern University Medical School.

AUXILIARY NEWS

EDITOR
Mrs. Oliver Veneklasen
ASS'T EDITOR
Mrs. Theodore Proud

Chart Course of Progress

Dr.'s Lady at Helm of AMA-ERF

Dear Doctor's Wife:

To go forth, medicine must forever be staffed with men and women who have well-trained minds, clear sight, noble character, high ideals and lofty vision.

You can help give the ship of medicine this able staff by supporting the AMA Education and Research Foundation, whose responsibilities are vital to the progressive forward reach toward the ultimate goal of man. As a doctor's wife, you can share in two of the Foundation projects:

1. In 1963-1964, over $132,520 was contributed to the medical schools of Illinois through AMA-ERF. It may be used for needed supplies for a laboratory, books for a library, building improvements, visiting lecturers, emergency use, etc.

2. The Loan Guarantee Fund assists in financing a medical education without a subsidy of any kind and may be used by any medical student in full-time training at an approved medical school or hospital. No interest need be paid during the period of training. Your contribution goes into a guarantee fund that acts as collateral for bank loans. Every dollar you give backs $12.50 in loans. In 1963-64, there have been 667 loans amounting to $686,800 in use in Illinois.

What can you do to help AMA-ERF?

1. Read the AMA-ERF Portfolio sent to every county AMA-ERF chairman and president.

2. Contact me—your Illinois State AMA-ERF chairman—for an exchange of information, ideas and materials.

3. Give contributions "In Appreciation" and "In Memoriam" to mark a special occasion.

4. Sell the attractive AMA-ERF notepaper which comes in white, pink and blue. This sale is clear profit.

5. Sell the very nice Christmas cards and stationery for an ample profit.

6. Purchase AMA-ERF playing cards, which are a find for the bridge players.

7. Give contributions to AMA-ERF that warrant the recognition of a lovely charm in silver or gold.

8. Put your own delightful and practical ideas into production, as an "Awkward Auction" or "Afternoon-At-Ravinia," etc.

So that the ship of medicine may continue on its journey toward the far horizon of perfect health for all men, let us continue to give of our hands, our hearts, our hopes and our dreams!

Mrs. Wendell Roller
AMA-ERF Chairman
309 South Main St.
Monmouth, Illinois

Community Service Day Emphasizes Doctor-Clergy Role in Patient Care



Responsible for the provocative program on "The Physician, The Clergy and the Whole Man" were, from left, Mrs. John Van Prohaska, chairman of Community Service Day; the Rev. Paul B. McCleave, director of the AMA Department of Medicine and Religion; Mrs. Williard Scrivner, ISMS Auxiliary president; and Mrs. Mitchell Spellberg, CMS Auxiliary president. More than 500 people attended the annual event at Orchestra Hall.

The need for a continuing dialogue between physicians and clergymen to appreciate and develop mutual efforts in the care of patients was stressed at the recent Community Service Day program of the Woman's Auxiliary to the Chicago Medical Society.

An audience of more than 500 at Orchestra Hall heard the discussion on "The Physician, The Clergy and The Whole Man." Moderator of the panel was the Rev. Paul B. McCleave, director of the AMA Department of Medicine and Religion.

Topics explored included situations involving a severely deformed infant; the question of using "extraordinary" procedures to sustain life in a dying patient; the role of the clergyman with the family and patient where a serious operation is contemplated; the part the patient's religion plays in the complete history of a case; and informing the patient and family in cases of normally incurable illnesses.

In the discussion on situations involving a seriously deformed child—including also those with a mental deficiency—the Rev. John M. Vayhinger said that a pastor has to help dislodge the parents' feelings of guilt.

Rev. Vayhinger, professor of psychology and counseling at the Iliff School of Theology in Denver, Colo., pointed out that these children "can have a place in your heart even though they can never progress to an adult level."

Rx Reviews and New Products

BALLOON SPLINT FOR FRACTURES



A new, lightweight, inflatable splint for emergency use on severely burned or broken limbs has been developed with special Capran® nylon film by the Bauer & Black Division of Kendall.

The Curity Immobil-Air bandage, as it is called, is a sterilized, inflatable sleeve that may be used directly over clothing or next to the skin. Before inflating, the loose-fitting tubular splint is eased over a broken or badly-burned arm or leg. Air, blown into the balloon-like device, exerts pressure against the injured limb, making it immobile in an extended position.

The unique splint protects against additional injury by holding bone fragments in place until hospital treatment can be initiated. Moreover, pressure from the sleeve stops bleeding and the escape of body fluids, thus reducing the chance of shock.

Widely tested in hospitals, the splint has been found useful by orthopedists for holding limbs in place after surgery and until a plaster cast can be applied. Unlike other materials, the nylon film made by Allied Chemical Corporation does not irritate the skin. Capran is made in a lesser mil thickness than would be necessary with other films to achieve the same high strength and toughness. In addition, Capran is especially resistant to abrasion, flex-cracking and puncture.

ELECTRO-LARYNX



In command of the sea-going tug used in the transport of giant Saturn missiles from New Orleans to Cape Kennedy is Captain Russ Dickinson, user of an artificial larynx. An actual laryngectomee, he is "about the finest example of complete rehabilitation we can imagine" according to the American Cancer Society's publication, the I.A.L. NEWS. Although he has learned esophageal speech, he uses his Aurex NEOVOX at work and in his social life—at home, on the telephone, when traveling, talking to strangers, and giving encouragement to groups of laryngectomees at clinics and hospitals. NEOVOX a hand-held battery-powered Electro-Larynx replaces the vibrations of normal voice cords in producing speech by simply holding the instrument snugly against the neck. The NEOVOX is made by and sold throughout the world by Aurex Corporation of 315 West Adams Street, Chicago 6, Illinois.

WYETH ADDS "100" TO NAME OF COMPOUND

Wyeth Laboratories has added "100" to the name of its latest non-narcotic analgesic, Zactirin Compound, to more clearly identify this drug that relieves common pain.

The change in name is being announced now by the firm's representatives throughout the country. Druggists, however, will not see the new name, Zactirin Compound-100, on labels until early next year. In the meantime, a pharmacist who receives a prescription calling for Zactirin Compound-100 can fill it with Zactirin Compound since the two products are identical.

Tablets of Zactirin Compound-100 are available for prescriptions only, and contain 100 mg. of ethoheptazine citrate with 227 mg. of aspirin, 162 mg. of phenacetin, and 32.4 mg. of caffeine.

Wyeth, Philadelphia pharmaceutical manufacturer, also produces a similar analgesic with a different potency—Zactirin, containing 75 mg. of ethoheptazine citrate and 325 mg. of aspirin.

BRONCHODILATOR BY AEROSOL

Aerosol administration of bronchodilators, steroids, antibiotics and drugs to thin mucous secretions is effective therapy of pulmonary diseases, according to Dr. K. N. V. Palmer of the University of Aberdeen, Scotland.

Writing in *Geriatrics* (19:612, 1964), he says aerosol treatment is superior to other methods because it produces a faster effect, less drug is required and, therefore, side effects are minimized. Isuprel (isoproterenol) "is preferable to epinephrine because it is a more powerful bronchodilator and it is often effective in patients who are no longer responsive to epinephrine." Also, Isuprel is called better tolerated.

Best results with Isuprel, Dr. Palmer states, were obtained when it was given in two inhalations about ten minutes apart. Bronchodilation resulting from the first inhalation increased penetration and adsorption of the second inhalation.

Frequently, the article continues, it is desirable to combine a mucolytic agent, such as Alevaire, with a bronchodilator and to use postural coughing to aid removal of excess bronchial secretion. Patients with intractable bronchial asthma usually received more benefit from a combination of Isuprel and atropine than from either drug alone. Combining a bronchodilator with an aerosol steroid is recommended in treating "drug-fast" asthmatics.

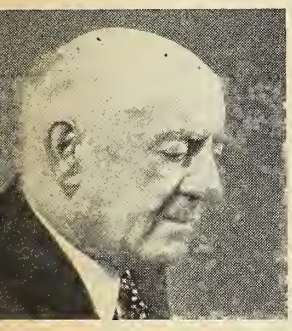
Isuprel and Alevaire are manufactured by Winthrop Laboratories.

PNEUMATIC APPLANATION TONOMETER

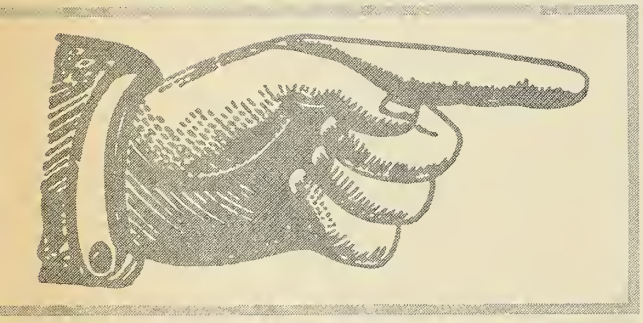
A new tonometer, the pneumatic applanation tonometer, has been developed which gives an accurate measurement of intraocular pressure and eliminates the disadvantages of instruments currently in use.

The tonometer evolved from an industrial pressure sensor based on a pneumatic system. It is easy to use, ruggedly built, can be gas-sterilized, and retains accurate calibration over long periods of time. Unlike present tonometers, it provides a permanent record which can be easily interpreted and permanently filed.

It has several advantages over the currently used Schiotz and Goldmann tonometers, which must be applied to the cornea and necessitate local anesthesia. Because of its greater sensitivity, the pneumatic tonometer can be used on the sclera as well as the cornea



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dry skin
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ichthyosis
pityriasis rubra pilaris
night blindness
metaplasia of mucous membranes

with equal accuracy. Use on the sclera means that it can be used without anesthesia and that only a minimum amount of training is necessary before accurate readings can be obtained.

Initial studies indicate that the new tonometer will prove more accurate than any of the conventional corneal tonometers. However, further investigations are required to confirm the precise degree of accuracy.

The pneumatic applanation tonometer has four major components: (1) an air pump which supplies compressed air to operate the sensor; (2) the sensor which is applied to the eye and produces a pneumatic signal; (3) a transducer which converts the pneumatic signal to an electrical signal; and (4) an amplifier and strip-chart recording unit that processes the electrical signal and provides a visual pattern of intraocular pressure. The sensor directly measures the intraocular pressure when the contacted surface of the eye is flattened or applanated.

The Schiotz tonometer, currently in greatest use throughout the world, is an impression type tonometer which measures the depth to which the cornea sinks when a weighted plunger is applied. The variability of globe rigidity and sclera distensibility has made accurate calibration of this tonometer very difficult.

The Goldmann tonometer, the second type in use today, is an applanation tonometer which measures the area of flattening of the cornea when a metal surface is applied with a controlled force.

Both of these instruments require local anesthesia. Only an electrical adaptation of the Schiotz tonometer can produce a permanent record.

TOLNAFTATE

Seven papers on tolnaftate, a new antifungal compound to be marketed by Schering Corporation early next year, were delivered before the Fourth Interscience Conference of the American Society for Microbiology, last month.

A summary report issued by John Leer, M.D., of Schering's Clinical Research Department, stated that "complete curing or definite control of infection" was achieved in 320 of 520 cases of superficial fungous infections, through the use of tolnaftate, in 19 independent clinical studies throughout the United States.

Eighty-nine per cent of superficial fungous infections in 93 patients, 90 of whom were from one to 15 years of age, cleared after four to five weeks of treatment with tolnaftate, according to a report by Jan Alban, M.D., of San Francisco.

An impressive "cured" or "improved" rate of 93 per cent was reported by Harry M. Robinson, Jr., M.D., of the University of Maryland School of Medicine, following a clinical study of 185 persons treated. The patients were suffering from a wide variety of superficial mycotic infections, some of which had existed for from

(Continued on next page)

physically — its microscopically fine **aqueous** vitamin A particles pass through the intestinal barrier more easily and may reach affected local area more readily through...
faster, more complete absorption

physiologically — provides all the known physiologically active isomers of the natural vitamin A complex which are believed to be directly utilizable in certain enzyme processes (in contrast to certain forms of synthetic vitamin A which require conversion in the body) for...
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three weeks to 20 years prior to the institution of tolnaftate therapy.

Dr. Irene Neuhauser of the University of Illinois College of Medicine reported that in a study of 100 patients suffering from superficial and cutaneous fungous infections, 75 wer clinically cured and another 14 "improved" following treatment with tolnaftate. "Results of studies in these 100 patients suggest that tolnaftate is a safe and exceptionally effective topical fungicidal agent," Dr. Neuhauser concluded.

No evidence of systemic toxicity due to tolnaftate was noted following a seven-day trial involving seven patients, Leon Goldman, M.D., and Alan Lasser, M.D., of the University of Cincinnati, reported to the Conference. The procedure for determining possible systemic toxicity of topical medications in man is total inunction of the body surface (90 per cent) for seven days.

In order to determine whether the new antifungal agent would produce eczematous allergic sensitivity, Dr. Adolph Rostenberg of the Department of Dermatology, University of Illinois, studied 54 subjects, all in their twenties. "From the fact that none of the subjects developed a sensitization to tolnaftate under the procedure used," he stated, "under the conditions of projected clinical usage, it is very unlikely that an eczematous sensitization would develop."

Marvin J. Weinstein, Edwin M. Oden, and Eugene Moss, all from Schering's Department of Microbiology, reported on studies of the antifungal properties of tolnaftate in vitro (in the test tube) and in vivio (in the living body).



NEW ELECTROPHORESIS SCANNER

A new scanner for electrophoresis separations has been introduced by the Gelman Instrument Company of Ann Arbor, Michigan. The Gelman Electrophoresis Scanner reads the absorbed dye intensity of cleared electrophoretic separations made on strips of cellulose acetate support media. The instrument features two separate meter scales—a high and a standard range—to provide accurate data. The plotting rule expands the serum migration length 2¾ times to give easy-to-read graphs. Using the movable plotting rule, coupled mechanically to the strip carrier mechanism, the operator records data easily. Results are as accurate as those obtained with automatic scanning equipment. ($397.00 from the Gelman Instrument Company, P.O. Box 1448, Ann Arbor, Michigan 48106)

SIMULTANEOUS MEASUREMENT OF BLOOD FLOW, PRESSURE, TEMPERATURE



Simultaneous measurement of blood flow rate and other physiological parameters such as pressure and temperature is now possible with a versatile, multichannel instrument, recently introduced.

The Statham Model M4000 Multiflo Meter permits as many as four blood flow rates or eight pressure measurements to be made simultaneously. Any combination of these parameters may be measured through the use of appropriate plug-in modules.

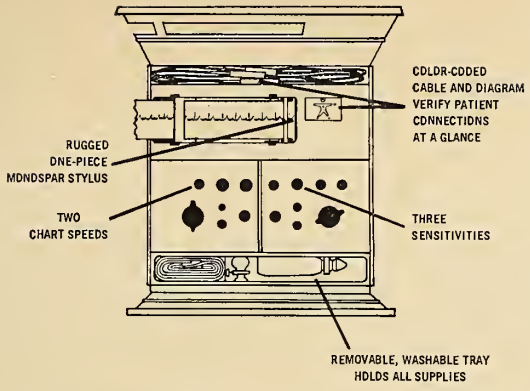
Flow measurements of blood, urine, saline solution, plasma, or nutrient media can be made with the Multiflo Meter by using Statham Flo-Probes. The probes are used periarterially and may be implanted acutely or chronically. The probe generates a magnetic field which is cut by the moving fluid, generating a tiny electrical signal proportional to the rate of flow.

Probes will detect ionizable fluid rates from as low as 2 ml/min to as high as 6000 ml/min. Reproducible accuracy is better than 3 per cent; linearity is better than 1 per cent across the entire measurement range. The Model M4000 output signal is fixed at 500 mv full scale; output impedance is 10,000 ohms.

The Statham P23 direct blood pressure, SF1 intracardiac or P4030 periarterial transducers are used in pressure measurements.

Delivery of the M4000 and its accessories is 60 days. Further information is available from Statham Medical Instruments, Inc., new subsidiary of Statham Instruments, Inc., 12401 West Olympic Blvd., Los Angeles 64, Calif.

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NEWS and ANNOUNCEMENTS

Appointments



Dr. John A. Blum

Nathan W. Helman, executive vice president of Mount Sinai Hospital, has announced the appointment of Dr. John A. Blum as full time director of the hospital's urology division of the department of surgery. Dr. Blum was also appointed Assistant Professor of Surgery at The Chicago Medical School.

Dr. Blum received his Bachelor of Arts degree from Dartmouth College where he graduated Phi Beta Kappa. He received his M.D. from New York University Medical School and was elected to Alpha Omega Alpha honor society. His internship and residency were spent at the University Hospital of Minnesota where he completed residencies in both general surgery and urology. Before coming to Mount Sinai Hospital, California Avenue at 15th Street, Dr. Blum was a medical specialist doing clinical research in urology at the University Hospital of Minnesota on a $30,000 government research grant.

Dr. Blum is author of two papers and co-author of nine on basic physiology.

Dr. Henry D. Staras became superintendent of Peoria State Hospital effective Nov. 16, Gov. Otto Kerner announced last month.

Dr. Staras, 44, assistant superintendent of Jacksonville State Hospital since August 1962, was recommended for the new position by Dr. Thomas T. Tourlentes, director of the Department of Mental Health Zone IV. Dr. Harold M. Visotsky, mental health director, approved the appointment.

Dr. Staras is a native of Lithuania. He was graduated from the Medical School of Karls-Eberhardt University, Tuebingen, Germany, in 1950, and completed his internship there in 1951. He came to the United States in September 1951. In May 1953 he completed a one-year rotating internship at St. Bernard's Hospital, Chicago and joined the staff of the Galesburg State Research Hospital in June 1953, as staff physician.

He participated in the approved specialty training program in psychiatry at the Galesburg State Research Hospital for two years and completed residency training in psychiatry at the Illinois State Psychiatric Institute, Chicago, in April 1959.

Daniel C. Searle, executive vice-president of G. D. Searle & Co., Chicago medical research and prescription drug manufacturing organization, today was elected to the Searle board of directors, the first fourth generation of the company's founding family to so serve.

Searle, 38, is the elder son of John G. Searle, president of the company. His great grandfather, Gideon Daniel Searle, founded the company 76 years ago.

He fills a vacancy on the board resulting from the retirement of David Beaton, Chicago insurance executive, who became a director 27 years ago.

Meeting Memos

for December-January



December 26-31—The Annual meeting of the American Association for the Advancement of Science will be held in Montreal Quebec Canada. Registration fee, which is $5.00, should be sent to AAAS, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005.

January 21-23, 1965—The thirty-second annual meeting of the National Association of Private Psychiatric Hosptals will be held in San Diego, California.

January 9-10—The American Therapeutic Society and the Minnesota Heart Association will co-sponsor the second annual symposium for physicians at the Radisson Hotel in Minneapolis. The symposium will feature experts in the cardiovascular field from the Mayo Clinic and the University of Minnesota as well as other U.S. Medical Centers. The main topic of discussion will be Therapy of Cerebral Vascular and Peripheral Vascular Disease. The symposium has been accepted for a maximum of 8½ credit hours by the American Academy of General Practice. Full information and reservation forms can be obtained by contacting the Minnesota Heart Association, 1821 University Avenue St. Paul, Minnesota 55104 or calling 646-6553.

Dr. David P. Earle, professor of medicine at Northwestern University Medical School Saturday, Nov. 7, became president of the Central Society for Clinical Research.

The 800-member organization of physicians held its 37th annual meeting last month at the Drake Hotel, Chicago.

About 1300 members and guests are in attendance for the reading of papers on various aspects of original research in clinical medicine and pediatrics.

The organization, founded in Chicago in 1929, draws its membership largely from among researchers at midwestern and southern medical schools.

Dr. Earle succeeds Dr. Richard V. Edert of the University of Arkansas. Dr. Edert was formally a member of the Northwestern University medical school faculty.

Dr. Earle will serve as president of the Society for one year.

He lives at 1034 Westmoor Road, Winnetka.

Dr. Henry Wishinsky has been appointed Director, Ames Research Laboratory, according to an announcement by Dr. C. J. O'Donovan, Vice President Research and Medical Affairs for Ames.

Dr. Wishinsky was formerly Director of the Division of Biochemistry at Sinai Hospital, Baltimore, Maryland. Prior to this, he directed the Endocrine Laboratory of the Department of Medicine at Georgetown Medical School, Washington, D.C. He is an author of scientific papers in the fields of organic synthesis in pharmaceutical chemistry, protein isolation and placental transport of drugs.

Joseph H. McNinch, M.D., Chief Medical Director of the Veterans Administration and president of the Association of Military Surgeons of the U.S., has announced his first appointments of Charimen for the 1965 Annual Meeting of the Association to take place during the month of November 1965, in Washington, D.C.

The appointed General Chairman is A. B. C. Knudson, M.D., Director, Physical Medicine and Rehabilitation Service, Department of Medicine and Surgery, VA Central Office, Washington, D.C.

Dr. Knudson is a past president of the Ameri-

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NEWS and ANNOUNCEMENTS (cont'd)

can College of Physical Medicine and Rehabilitation, and a consultant with the medical committee of the President's Committee on Employment of the Handicapped. He received a citation for Meritorious Service in 1961 for his work on this committee. He was the 1962 recipient of the Gold Key Award presented by the American Congress of Physical Medicine. Dr. Knudson was General Chairman of the Association's 1958 convention.

Awards

The 1964 Stritch Award of Loyola University was bestowed upon Dr. Francis J. Gerty, one of Illinois' best-known and most highly regarded medical figures, November 24 in the International Room of the Conrad Hilton Hotel.

In announcing the selection of Dr. Gerty for the Award that is given annually to an outstanding person in medicine and/or medical education, the Very Reverend James F. Maguire, S.J., Loyola's president, cited Dr. Gerty's "over forty-year career as educator, physician, and statesman for the cause of better mental health."

Over 1,100 persons watched as Father Maguire, S.J., made the presentation.

Selection of 1964 Merit Award winners for distinguished achievements in science was announced last month by Howard C. Pettett, president of the Chicago Technical Societies Council.

The awardees are Johan Bjorksten, president, Bjorksten Laboratories, Madison, Wis.; Herbert T. Walworth, director industrial hygiene and occupational health, Lumbermens Mutual Casualty Company, Chicago; and Bernard E. Schaar, founder and retired president of Schaar Scientific Company, Chicago. *(Career highlights of the awardees are briefed on the attached fact sheet.)*

Merit awards are made annually by the Chicago Technical Societies Council to one or more midwesterners nominated by their fellow scientists. The Council is an affiliation of 46 individ-

ual engineering, technical, and scientific societies. Through its affiliated organizations it represents more than 40,000 technical men and women in the Chicagoland area.

A scientific exhibit entitled "Surgical Anatomy of the Temporal Bone" was given First Award in Otolaryngology by the American Academy of Ophthalmology and Otolaryngology at their 19th annual meeting in Chicago, October 18 through 23. The purpose of the exhibit was to introduce a method of teaching from anatomical specimens in series. Temporal bones were preserved and sunken in plastic. Four types of operations were illustrated and discussed. The students in this teaching program viewed the operative procedures under the microscope. The exhibit was prepared by Dr. Ralph J. Caparosa of Pittsburgh; Dr. Donald H. Walker, Sharon, Pennsylvania; Drs. Bernard Leff and Herman Felder, Pittsburgh under the sponsorship of the Otologic Services of the Eye and Ear Hospital, University of Pittsburgh.

First Award in Ophthalmology was given to an exhibit entitled "Proliferative Diabetic Retinopathy: Clinical Observations." A comprehensive three-year study showed the proliferative stages of diabetic retinopathy and was presented with fundus photographs viewed through stereoscopic lenses. The exhibit was prepared by Matthew D. Davis, M.D.; Ronald L. Engerman, Ph.D.; and Yvonne L. Magli from the University of Wisconsin Medical School in Madison, Wisconsin.

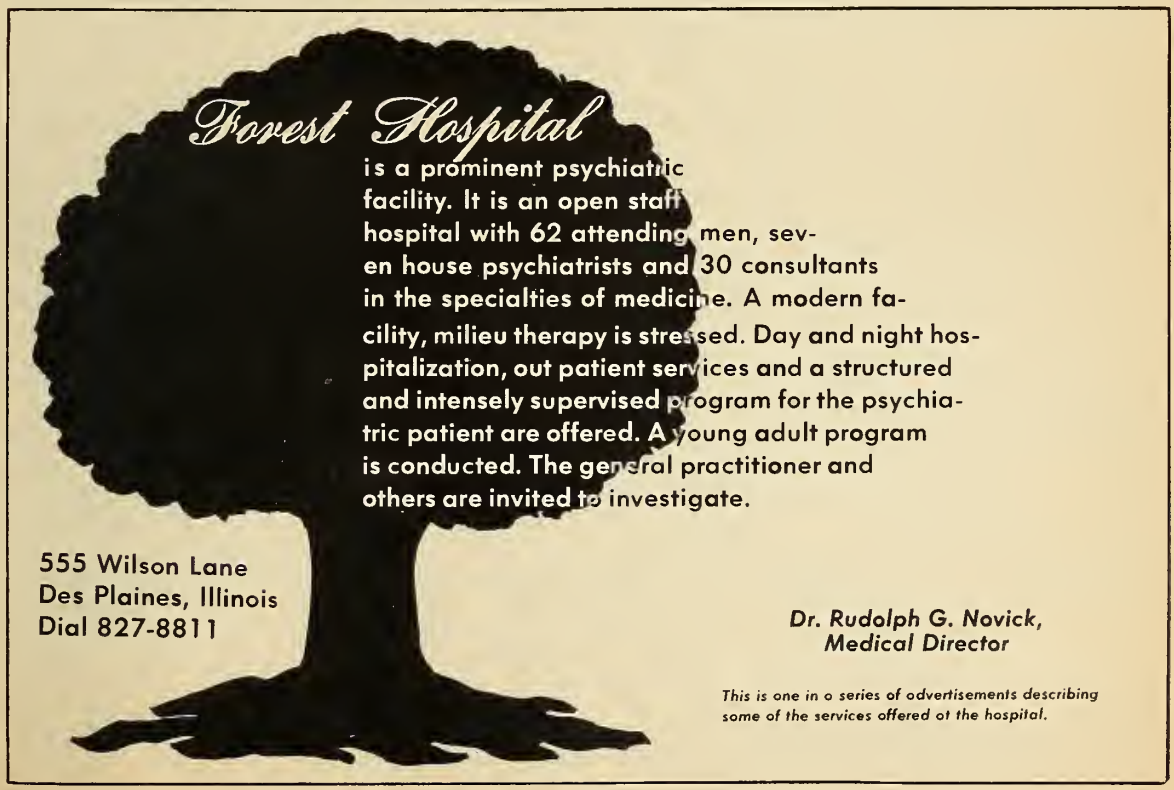
Elections

At the Annual Business meeting of the Kane County Medical Society held October 14, 1964, the following officers were elected for the year 1965:

President: Dr. W. G. Eilert—Aurora; Vice-President: Dr. Robert W. Ollayos—Elgin; Secretary-Treasurer: Dr. C. Robert Cummins—St. Charles.

The appointments as Councilors to replace retiring members were announced by the respective branches of the society as follows:

Northern Branch: Dr. Douglas Morton—Elgin, Dr. Franz Stockmann—Elgin; Southern Branch: Dr. Peter Starrett—Aurora, Dr. James Marks—Aurora; Mid-Branch: No appointment yet made. To be announced later.



Crippled Children's Clinics for January

January 6 Champaign-Urbana—McKinley Hospital
January 6 Hinsdale—Hinsdale Sanitarium
January 7 Peoria Cerebral Palsy—Roosevelt School
January 7 Sterling—Community General Hospital
January 7 Cairo—Public Health Building
January 7 Flora—Clay County Hospital
January 7 Springfield General—St. John's Hospital
January 8 Chicago Heights Cardiac—St. James Hospital
January 13 Joliet—Silver Cross Hospital
January 19 Peoria General—Children's Hospital
January 19 Quincy—St. Mary's Hospital
January 19 East St. Louis—St. Mary's Hospital
January 20 Evergreen Park—Little Company of Mary Hospital
January 21 Rockford—Rockford Memorial Hospital
January 21 Effingham Rheumatic Fever & Cardiac—St. Anthony Memorial Hospital
January 21 Decatur—Decatur & Macon Co. Hospital
January 21 Elmhurst Cardiac—Memorial Hospital of DuPage County
January 22 Chicago Heights Cardiac—St. James Hospital
January 26 Peoria General—Children's Hospital
January 27 Centralia—St. Mary's Hospital
January 27 Springfield Cerebral Palsy (P.M.)—Memorial Hospital
January 27 Elgin—Sherman Hospital
January 28 Mt. Vernon—Masonic Temple

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Designed for high school students who are undecided about careers, the film follows a young housewife and mother, from her first day in a mental hospital until her departure.

Clean and vivid interpretation of their roles by all of the actors and sensitive camera work make the 25-minute color film an emotional experience as well as a recruitment film.

Discussion materials are available with the film and will be distributed after November by the National Association for Mental Health, 10 Columbus Circle, New York.



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GALLBLADDER SURGERY, Three Days, March 8, 1965
SURGERY OF HERNIA, Three Days, March 11, 1965
PEDIATRIC SURGERY, One Week, March 22, 1965
PROCTOSCOPY & SIGMOIDOSCOPY, One Week, December 14, January 18, 1965
VARICOSE VEINS, One Week, December 14, January 18, 1965
GYNECOLOGY, Office & Operative, Two Weeks, March 22, 1965
VAGINAL SURGERY, One Week, December 14, February 15, 1965
BOARD REVIEW COURSE IN MEDICINE, PART II March 15, 1965
BASIC ELECTROCARDIOGRAPHY, One Week, March 1, 1965
PATHOLOGY BOARD REVIEW COURSES FOR SPECIALTIES, Request Dates
OBSTETRICS, General & Surgical, Two Weeks, March 8, 1965
ARTERIOGRAPHY, Four Days, February 2, 1965
Informal Clinical Programs in Radiology, Pediatrics, Fractures, Dermatology, Otolaryngology, Ophthalmology, One to Two Weeks, Starting the First of Any Week.

Information concerning numerous other continuation courses available upon request.

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Obituaries

Walter B. Bayard, Chicago, died October 27, aged 74. A graduate of Northwestern University School of Medicine in 1917, he was an eye specialist.

Arthur C. Conrad*, Michigan, formerly of Chicago, was a graduate of the Hahneman Medical College in 1914. He died August 9, aged 72.

Nevin E. Diehl*, Capron, died November 11, aged 64. He was a graduate of Chicago Medical School in 1937.

Edward M. Dorr*, Chicago, died October 25, aged 62. A graduate of Rush Medical College in 1929, he specialized in obstetrics and gynecology. Twice chief of staff, he had been a staff member of Wesley Memorial hospital since 1947. Dr. Dorr was president-elect of the American Association of Maternal and Child Health and former president of its Illinois organization. He was also president of the Joint Maternal Welfare committee of Chicago and of the Chicago Gynecological society.

John A. Gardiner*, Chicago, died November 24, aged 81. A graduate of the University of Toronto Faculty of Medicine in 1911, Dr. Gardiner was a cardiologist and a specialist in internal medicine. He retired in 1961 after serving on the staff of Presbyterian-St. Luke's, MacNeal Memorial, Community Memorial General and Hinsdale hospitals. He was a diplomate of the American Board of Internal Medicine, a fellow of the American College of Physicians and had taught at University of Chicago and University of Illinois medical schools. He was an emeritus member and a member of the Fifty Year Club of ISMS.

Beatrice H. Gilmore, Springfield, was a graduate of Womans Medical College of Pennslyvania in 1905. She died March 9, aged 84.

Christian D. Hauch*, Chicago, died November 17, aged 83. A graduate of Chicago Homeopathic Medical College in 1910, he retired in 1956. He had been chief of the obstetrical department of Evangelical hospital for 18 years, on the staff of Wesley Memorial hospital and a faculty member of Northwestern university medical school since 1912. He was an emeritus member and a member of the Fifty Year club of ISMS.

Edward H. Kupke*, Naperville, died October 14, aged 76. In 1917 he was a graduate of Chicago College of Medicine and Surgery. He was an emeritus member of ISMS.

Amzi S. Plummer*, Peoria, died November 2, aged 90. He was a graduate of the St. Louis College of Physicians and Surgeons in 1899. He was an emeritus member and a member of the Fifty Year Club of ISMS.

Hollis E. Potter*, Florida, formerly of Chicago, died October 15, aged 84. In 1908 he was a graduate of Rush Medical College. Dr. Potter was an emeritus member and a member of the Fifty Year Club of ISMS.

Ernest Spieler*, Chicago, died September 10, aged 95. In 1920 he was a graduate of Eotvos Lorand Tudomanyegyetem Orvostudomanyi Fakultas, Budapest, Hungary.

John C. R. Wettstein*, Ocala, Florida, formerly of Illinois, died October 31, aged 82. He was a graduate of Chicago College of Medicine and Surgery in 1908.

**Denotes membership in Illinois State Medical Society.*

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